APPLICATION OF MACHINE LEARNING TO REAL ESTATE PROPERTY APPRAISAL.

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Abstract

Accurately estimating property values presents a challenge for government, business, and the general public. Property values are influenced by a number of factors that change over time and can interact in complex ways. While the application of machine learning offers a data-driven approach to modeling these complex relationships, limited research has examined this in the Canadian real estate market. This thesis applies machine learning to real-world local real estate transaction data from Toronto, Canada, with the goal of identifying factors that contribute to residential property value estimation. Experiments applying several machine learning algorithms have demonstrated that feature and data representations can have a greater influence on predictive performance than the choice of learning algorithm. Results show that the inclusion of spatial, macroeconomic, and local market indicators can facilitate and improve predictive performance across numerous machine learning algorithms.

Acknowledgements

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Chapter 1: Introduction

The question of how property should be evaluated and what factors can affect property value has occupied people's minds since the dawn of time. First attempts to explain factors affecting property value can be traced back as far as 500-400 BCE to ancient Persia and Greece. For example, Plato, with his student Aristotle, were also trying to reason and explain what exactly can and should be attributed as factors affecting property value (Aristotle, 1984, Politics; 1252b–1253a; Plato, 1997, Republic, 449c–466d). Even then, during a time when technological and societal development were much simpler, such powerful minds could not reach a consensus. As time passed and new factors intertwining with property value were introduced by society and technological advancements, numerous studies have been conducted in attempts to explain the ever-changing factors affecting property values. Whereas Aristotle and Plato considered property value in terms of observable surroundings, such as family occupying the property and the local Polis in which human coexistence occurred, Adam Smith had to consider more complicated factors introduced by the Industrial Revolution (Smith, 1776/1963). With the passage of time and the development of society, real estate and the factors that affect its value have also evolved. This thesis will examine how application of machine learning methods can help identify and explain the factors affecting real estate values in Canada at the individual residential transaction level.

Property value can be defined as the highest dollar value a real estate asset would exchange for in an open and competitive market, where buyer and seller are unrelated parties and are operating voluntarily and independently of one another. This definition is consistent with how the Canadian government, the Canada Revenue Agency, and independent investors view the fair market value of a real estate asset (Canada Revenue Agency, n.d.; Investopedia, 2025). Additionally, this definition reflects the fact that the value of an individual property fluctuates, reflecting factors influencing the market at the time of the transaction and consequently affecting aggregated values (Appraisal Institute, 2020). Moreover, the value of real-estate assets is tied to the affordability of the housing, housing quality, and access.

Real estate values are increasingly related to global housing challenges (United Nations, 2019). Housing was identified as a key component in the 2030 United Nations (UN) Agenda for Sustainable Development (UN2030 Agenda). Adopted in 2015 by Canada and 192 other UN member states, the agenda defines housing as a common driver for achieving the Sustainable

Development Goals (SDGs), prompting research, analysis, and monitoring of factors affecting housing affordability. Furthermore, the UN2030 Agenda highlights the significant ripple effect of housing across 17 SDGs and their 169 associated targets. The UN 2030 Agenda identifies housing as a direct and indirect contributor to the following SDG targets: reducing poverty, improving health and well-being, achieving gender equality, promoting economic growth, providing sustainable cities and communities, and providing quality education, justice, and strong institutions.

In Canada, the real estate sector accounts for a significant portion of national wealth. According to a 2024 Statistics Canada report, the real estate sector alone in 2024 supported over 1.2 million jobs, generated $143.4 billion in annual GDP, and accounted for about 25% of national wealth. Canada Mortgage and Housing Corporation (CMHC) states that Canadians are facing growing challenges in accessing affordable housing (CMHC, 2026). Additionally, CMHC draws attention to the recent volatility in Canadian Real Estate Markets, noting the erosion of consumers' purchasing power between 2023 and 2025 (CMHC, 2026).

The volatility of the Canadian real estate market creates challenges for long-term planning by governments, businesses, and the general population. Accordingly, the Federation of Canadian Municipalities (FCM) identifies housing price volatility as a major challenge for municipal planning and the delivery of public services. As illustrated in Figure 1, municipalities are responsible for delivering a broad range of public services (FCM, 2024). Similarly, the Canadian Home Builders' Association (CHBA, 2024) states that real estate market volatility makes long-term planning more difficult and reduces new housing construction, affecting businesses, employment, and municipal economic growth.

A data-driven approaches allow us to approximate the dynamics and compounding effects of hidden economic processes. This thesis explores the application of machine learning (ML) approaches for the real estate valuation problem with the goal of identifying hidden patterns and relationships and assessing the impact of economic factors, real estate market conditions, and their combinations**.** Traditional real estate valuation methods rely on a limited set of observable property characteristics and often fail to capture the complex, nonlinear relationships among macroeconomic, location specific, and property-specific characteristics.



Figure 1. Services Provided by Municipalities in Canada.

Note. Reproduced from *Making Canada's Growth a Success: The Case for a Municipal Growth Framework* (p. 7), by Federation of Canadian Municipalities, 2024. Copyright 2024 by the Federation of Canadian Municipalities.

Numerous studies have called for looking at a bigger picture, when assessing property value, rather than just focusing on isolated variables (Wei et al. 2022; Ganiyu et al. 2024; Toprakli 2024). However, there remains a limited understanding of which additional property-specific and engineered features meaningfully improve predictive performance, particularly in dense urban markets such as Toronto. As a result, there is a growing need for advanced analytical solutions capable of improving prediction accuracy and uncovering hidden patterns in real estate transaction data.

Machine learning offers a promising solution by enabling the analysis of large datasets and the identification of interactions that traditional approaches may overlook. By applying an ML algorithm to a dataset representing the Toronto real estate condominium market and leveraging ML's processing power to analyze data, this thesis aims to develop a framework for housing price assessment using property-level features and additional explanatory factors that may be overlooked by appraisal methodologies that employ traditional evaluation approaches.

The goal of this study is to identify macroeconomic, local-market, property-specific, and engineered features that, while being overlooked by traditional valuation methods, can serve as important predictors for ML property-valuation models. Understanding and incorporating such factors into evaluation processes will support the future development of evidence-based decision-making tools.

The study is also aimed at identifying important contributing factors in the local Canadian context. The number of studies focused on the Canadian Real Estate Market is limited, and none were found that use real-world, local real estate transaction data from Canada. Advancements in this domain will enable policymakers and financial regulators to improve the accuracy and transparency of real estate valuation and address existing biases (Toprakli, 2024).

Chapter 2: Literature review

A conducted literature review assessed the application of machine learning approaches to real estate problems. Using the Elsevier Scopus online database, a search was performed using the following query: "machine learning real estate". The search on April 26, 2026, yielded 1196 English-language publications, simultaneously indicating global research interest in the field and a lack of local publications on the subject. While India, the United States, China, and the United Kingdom lead the way and collectively account for over 49% of total publications, the share of Canada-originated articles is only 2.1%. Figure 2 shows the geographic distribution of publications and Figure 3 illustrates the increasing number of yearly publications, reflecting the growing research interest. Additionally, it was found that vast majority of publications originating both inside and outside of Canada, rely on localized foreign datasets with limited generalizability of reported findings to the Canadian real-estate market. Furthermore, while the application of machine learning (ML) to real estate data has become commonplace research across various regions, literature review has found no common process for transforming raw data into a processed dataset that is subsequently used to train and evaluate a machine learning model**.** Each study was found to adjust the workflow in an effort to reflect local characteristics and regional identity, and this approach was found to be an important aspect of improving model accuracy. Existing quantitative investigations of the effects of Canadian macroeconomic factors and local market indicators on housing prices are insufficient. Only a small number of studies incorporate both property-specific features, such as the number of rooms and property size, macroeconomic factors, such as inflation and gross domestic product, and local market indicators into real estate value-prediction models. Further investigation into the contribution these features make to real estate value is required.

2.1 Traditional Real Estate Evaluation Methods

The literature review identified several traditional practical methods of real estate evaluation currently employed by insurance, real estate, and commercial property investment industries. Figure 4 illustrates traditional real estate valuation methods, which are the cost approach, the sales comparison approach and the income approach (Pagourtzi et al., 2003; Glumac et al., 2020), and the Hedonic Price Model outlined by Rosen (1974). Each traditional valuation method is characterized by a distinct methodology and specific real-world applications, as each method serves a unique purpose and caters to the needs and goals of specific stakeholders (Glumac

& Rosen, 2020). Neither researchers nor stakeholders can agree on the superiority of one approach over another (Verma, 2024; Gala et al, 2024; Kandipati, 2025), as each method has its own strengths and limitations (Pagourtzi et al., 2003; Glumac et al., 2020; Toprakli, 2024). Highlighting the limitations of each housing appraisal method as a key reliability challenge in real estate value estimation, Pagourtzi (2003), Glumac et al. (2020), Valier (2020), and Toprakli (2024) call for an exploration of the applicability of ML approaches to address these challenges. Toprakli (2024) discussed cost approach, the sales comparison approach and the income approach methods and their common limitations: the reliance of these methods on expert opinion and partial incorporation of available data. Beyond fluctuating prices and market volatility, the real estate evaluation is further complicated by a constantly changing landscape. One example is newly constructed properties, which may possess novel characteristics that fall outside the expertise of individual appraisal specialists who rely on historical information. The analysis of such properties requires the quick incorporation of novel data to ensure timely and accurate predictions. Toprakli (2024) states that the ability of ML algorithms to analyze vast amounts of data and identify complex patterns offers notable advantages over traditional appraisal methods, particularly in terms of enhanced accuracy, increased efficiency, and reduced appraisal costs.

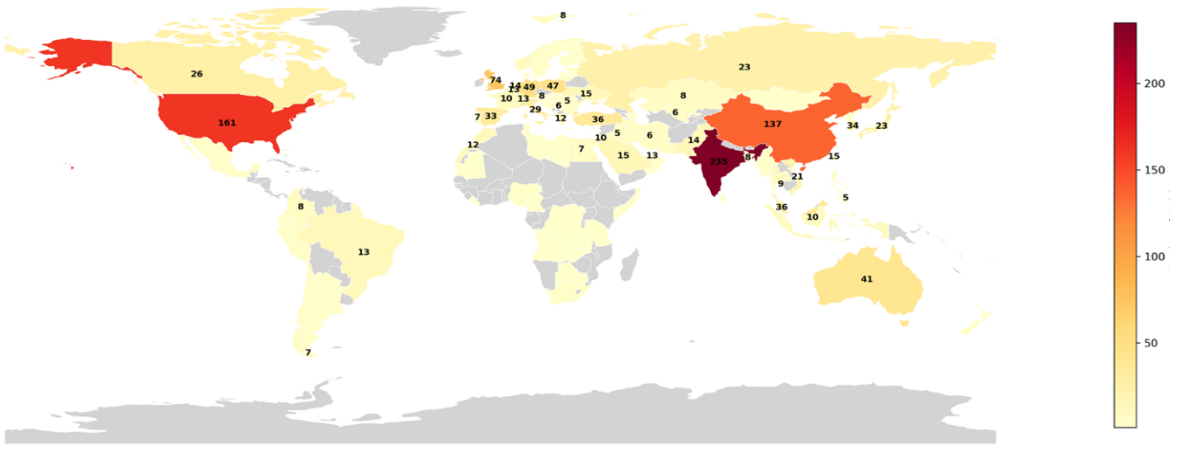

Figure 2. Geographical Distribution of Publications as of April 26, 2026, 11:59a.m.

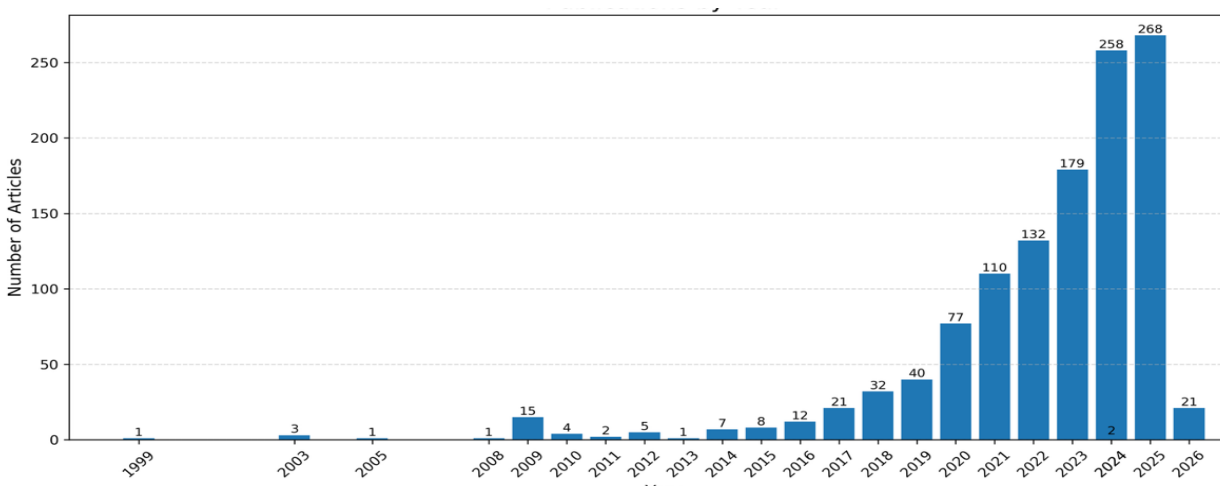

Figure 3. Annual Publication Count starting from 1999 – April 26, 2026.

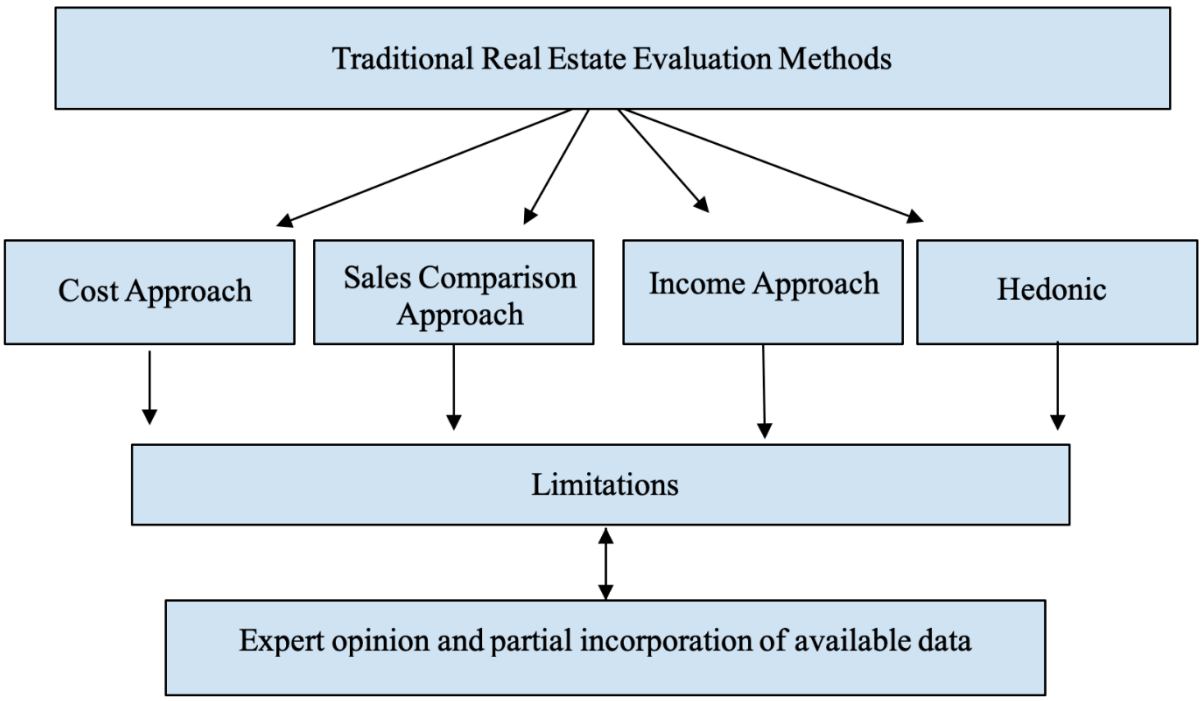

Figure 4. Traditional Evaluation Approaches

2.1.1 Cost Approach

The cost approach assumes that a buyer will not pay for property more than it costs to recreate or rebuild the same equivalent structure on the same land (Glumac et al., 2020). Very popular in the insurance industry, this approach allows estimating value by calculating the cost of replacing or reproducing a particular property, factoring in the loss of value due to structural depreciation (Pagourtzi et al., 2003). However, since this method does not account for current

market conditions and the economic supply-demand phenomenon, it is often rejected by individuals or businesses when it comes to competitive real estate transactions. Moreover, the cost approach becomes increasingly challenging when evaluating historical or irreplaceable structures, such as historical buildings or art. Glumac et al. (2020) note the limitations of the cost approach when the depreciation of structures cannot be adequately measured, identifying this issue as the "Achille's heel" of the cost approach method.

2.1.2 Sales Comparison Approach

The sales comparison approach estimates property value by comparing the subject property to recently sold comparable properties within the same market. What sets this approach apart from the cost approach is the introduction of location and local market dynamics, which give greater weight to current local market conditions rather than the cost of reproducing the same structure. The sales comparison approach, grounded in the principle of substitution using similar sold properties, hinges on identifying comparable properties that have been recently sold and adjusting their sale prices to reflect variations in characteristics (Pagourtzi et al., 2003). Price estimates are adjusted by comparing the features of the subject property to those of comparable sold properties taking in account recent market tendencies. For example, if two identical properties go on the market on the same street, one year apart, the seller and buyer of the latter property will expect a new price that at the same time: reflects the price of the previously sold property and adjusted according to recent market dynamics. In the case that the compared properties are not identical, the value of the subject property is also adjusted according to the value of features found or missing in the comparable property. This method, while offering a degree of flexibility and being widely adopted by real estate professionals, is sensitive to input data. The limitation of the sales comparison approach is rooted in the high reliance of the method on the quality of available comparable data. Noting the challenges of applying the sales comparison approach in complex and rapidly changing markets, where relevant competitive sales data may become limited, Toprakli (2024), highlights the risk of bias in evaluation if the assessor misses or is unaware of relevant property features.

2.1.3 Income Approach

Used for income-generating properties, the income approach derives value from a property's potential to generate future income (Pagourtzi et al., 2003). The approach estimates

property value based on the net operating income the real estate asset produces and the capitalization rate that reflects market expectations and risk (Glumac et al.,2020). This method is particularly relevant in investment contexts where future cash flows are at the center of the valuation process (French, 2018), in which cash flow is calculated by subtracting total cash outflows from total cash inflows (Investopedia, n.d.). French (2018) notes a limitation of the income approach's application: the property must be suitable for trading activity.

2.1.4 Hedonic Model

The hedonic model defines prices as the implicit prices of a product's attributes, determined by the quantities of product characteristics (Rosen, 1974). Rosen (1974) sketched a model of product differentiation based on the hedonic hypothesis that goods are valued for their utility-bearing attributes and measurable characteristics of the property. Rather than defining the overall product price, Rosen (1974) and Green and Malpezzi (2003) defined hedonic prices as the implicit prices of a product's attributes, determined by the quantities of product characteristics. The hedonic pricing method calculates property value as the aggregate contribution of individual property attributes, where each attribute is assigned a value. This approach allows flexibility, as an exact value can be approximated for each factor affecting the property's overall value (Owusu-Ansah, 2011; Martins-Filho, et al., 2025). Furthermore, the hedonic model allows the creation of a customized valuation approach tailored to the specific goals and needs of stakeholders, as values can be assigned to tangible and intangible features. An intangible feature, though it may not be physically observable, may influence the value of real estate. An example of such an intangible feature is the visual impression of neighborhood characteristics, which, according to Wei et al. (2022), was difficult to measure in the past. As noted by Glumac et al. (2020), the hedonic price model, though highly versatile, is limited by the information stakeholders possess about property characteristics and their potential impact on property value.

2.2 Application of Machine Learning to Real Estate

The reviewed literature demonstrated the growing number of publications on application of machine learning techniques to the real estate price prediction problem, (Figure 3). Multiple studies across diverse geographic locations have shown the effectiveness of ML-based approaches in capturing nonlinear relationships and interactions between property attributes and its price. The reviewed studies commonly adopted a supervised learning framework for model development and

property value prediction based on available data (Truong et al., 2020; Ge et al., 2021; Alsulamy, 2025). The overall data preparation and modeling processes are typically aligned with the Knowledge Discovery in Databases (KDD) framework presented in Figure 5, including data selection, data preprocessing, data transformation, model development, testing, computational experiments and their results interpretation (Fayyad et al., 1996).

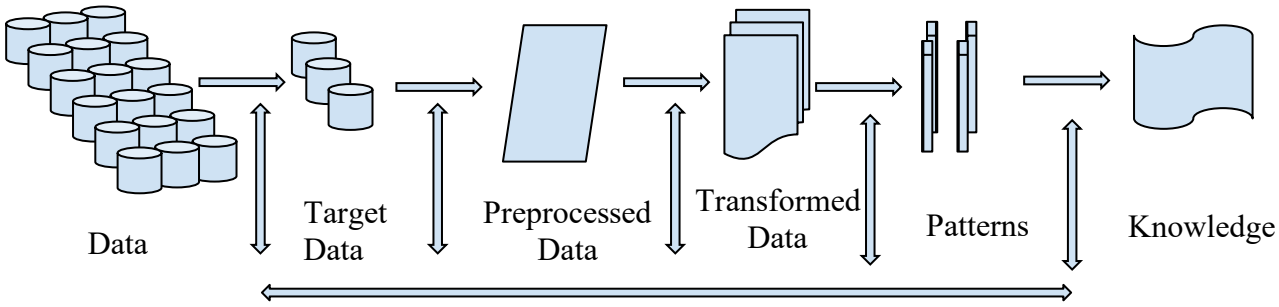

Figure 5. Knowledge Discovery in Databases framework, adapted from (Fayyad et al., 1996.).

2.2.1 Data Preprocessing and Feature Engineering in Real Estate ML Studies.

Across numerous reviewed studies, data preprocessing has emerged as a crucial component of application of ML-based approaches to the real estate price prediction problem. Despite differences in the datasets used in the reported studies, a consistent preprocessing workflow aligned with the Knowledge Discovery in Databases (KDD) framework has been identified across the works of Truong et al. (2020), Naik et al. (2023), Disha et al. (2023), Gala et al. (2024), and Verma et al. (2024). Before data preprocessing can begin, the data must be collected. This step typically involves collecting property transaction information from available real estate databases and websites. The collected dataset commonly includes property-measurable attributes: size, number of rooms, and sold price**.** Following data collection, exploratory data analysis (EDA) is commonly performed to reveal characteristics of the dataset**.** Once the data has been collected and explored the process of data cleansing is performed, which addresses issues of missing values, data inconsistency, and presence of outliers. Next step is data transformation, which is applied to ensure data compatibility with ML algorithms. While feature engineering is not a required or consistently applied preprocessing step, several studies report performance improvements when engineered features are introduced as part of the transformation process. Common practice involves constructing ratio-based variables, such as price per square foot or size per bedroom, to capture

relationships between property characteristics and property value (Joseph et al., 2024; Verma et al., 2024).

2.2.2 Machine Learning Models and Training Strategies

The reviewed works have employed several ML algorithms for the task of real estate price prediction, including Decision Trees, Random Forests, Gradient Boosting, Extreme Gradient Boosting (XGBoost), Light Gradient Boosting Machine (Light GBM) (Truong et al., 2020), CatBoost, Ridge Regression (Alsulamy, 2025), and Artificial Neural Networks, specifically a feedforward Multilayer Perceptron (MLP) (Ge et al., 2021).

Existing studies indicate the dominance of ensemble-based models in modeling complex relationships commonly found in real estate data. Model development follows the supervised learning approach, with datasets divided into training, testing, and sometimes validation subsets where models are evaluation on a subset of samples unseen on the training step. Alternatively, model performance is evaluated using cross-validation procedure, in which multiple estimates of predictive performance are produced on unseen data. To enhance model performance, grid search optimization can be employed for model parameter tuning (Truong et al., 2020; Disha et al., 2023; Alsulamy, 2025).

2.2.3 Model Evaluation and Performance Metrics

The examined studies have identified the consistent use of multiple evaluation metrics. The authors commonly report models' performance when working with real estate data using: the Mean Absolute Error (MAE), Mean Squared Error (MSE), Root Mean Squared Error (RMSE), Root Mean Squared Logarithmic Error (RMSLE), and the coefficient of determination (R^2). Recent studies suggest that real estate data often deviate from normality and exhibit skewed distributions, mainly due to outliers and extreme values. The consistent use of multiple metrics indicates the need to capture absolute and relative errors in model performance when working with real estate data (Truong et al., 2020; Ge et al., 2021; Alsulamy, 2025).

2.4 Importance of Macroeconomic Factors

Several studies have identified the macroeconomic environment, as well as supply and demand dynamics as factors influencing real estate prices (Gram et al. 2016; Lewandowska et al. 2023; Latorre et al. 2024). Lewandowska et al. (2023) state that increases in national GDP are associated with property prices growing, particularly in regions with limited housing supply. Latorre et al. (2024) argue that declining unemployment can stimulate domestic housing demand,

whereas tighter monetary policy may increase borrowing costs and prompt financial institutions to adopt stricter lending standards, thereby reducing housing demand.

Gram et al. (2016) identified a significant correlation between prices of residential real estate and selected macroeconomic factors: Gross Domestic Product (GDP), the unemployment rate, and the interest rate. The study of the 2003-2012 period demonstrates that the effects of these factors vary across countries, depending on each market's economic and cultural orientation. For example, Gram et al. (2016) found a strong relationship between real estate prices and GDP in Slovenia, France, and Norway.

Latorre et al. (2024) examined the effects of Gross Domestic Product (GDP) and the unemployment rate on home price index (HPI) in Spain and Croatia and found a strong relationship between the unemployment rate and real estate prices in both countries during the 2013-2022 period. Latorre et al. (2024) note that a strong relationship between the unemployment rate and real estate prices in both countries may be attributed to the tourism-oriented structure of their economies.

Lewandowska et al. (2023) also found a strong correlation between housing prices and GDP, Inflation, interest rates, and unemployment rate. The study examined the influence of macroeconomic factors on housing prices across 16 countries, including Canada, and found evidence supporting the inclusion of these factors in future studies.

2.5 Literature Review Summary

The literature review helped to identify several research gaps. Individual transactions are influenced by more than just property features, as each transaction is also shaped by socioeconomic processes, neighborhood characteristics, market conditions, and economic environment. Several publications have shown a correlation between these factors and aggregated property values. No adaptation has been found when working with Canadian real estate data at the individual property transaction level. The number of studies focused on the Canadian Real Estate Market is limited, and none were found that use real-world, local real estate transaction data from Canada. To successfully apply ML to real estate data from Canada, researchers need a deeper understanding of how to transform raw data into meaningful features. Also, literature review identified an apparent lack of research on individual property value prediction, as the majority of publications use aggregated values. Not all available real-estate data may have a meaningful impact on real-estate transactions, i.e., produce a signal that is transcribed to the price. It is

Important to understand which features influence housing prices and which may be deemed irrelevant. Identifying and excluding irrelevant features from a model is a key step for improving model performance (Li et al., 2025).

Chapter 3: Methodology

This study follows a supervised machine learning workflow aligned with the Knowledge Discovery in Databases (KDD) framework presented in Figure 5. A quantitative methodology will be applied to a created dataset to uncover relationships and interactions between property attributes and its value using regression machine learning models. The novelty of the proposed study lies in developing a framework for a single-family residential property evaluation in Toronto condominium market following systematic approach and using property features along with spatial, macroeconomic and local real estate market factors.

3.1 Dataset Planning

Dataset construction involves identifying data required to accomplish the study's objectives. For this study, the required dataset must incorporate both basic property characteristics, spatial property information, macroeconomic factors, local market conditions, and sale price to enable supervised learning as shown in Figure 6.

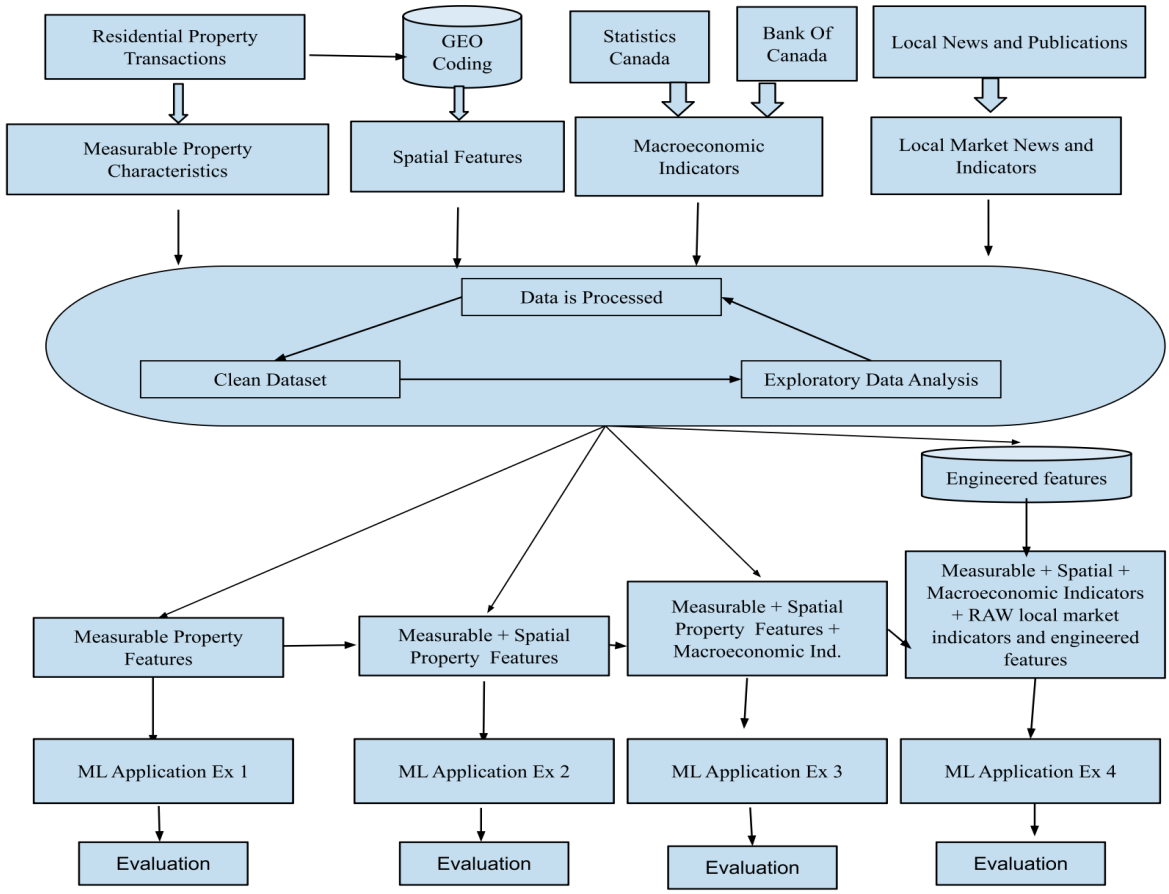

Figure 6. Data Collection and Model Evaluation Pipeline.

Basic property characteristics include the number of bedrooms, number of bathrooms, dens, and kitchens, as well as the number of garage parking spaces, monthly maintenance fees, annual property taxes, and overall property size estimate.

To account for geographic variability and neighborhood-specific impacts on housing prices, spatial information will be integrated into the dataset. For this purpose, longitude and latitude coordinates for each property will be generated using the property address.

To describe local market dynamics into the model, the supply indicators will be collected and integrated into the dataset using publicly available documents. For this purpose, end-of-month data on newly listed and unsold listed for sale properties will be extracted from TRREB's monthly Market Watch reports. These reports are published by TRREB on a monthly basis and reported by local media. Additional features will be engineered using local market supply indicators to enhance the model's ability to capture local supply–demand conditions.

3.2 Data Collection

This study will focus on the Toronto condominium real estate market. Toronto was identified as the largest city in Canada by population in the 2021 Census Profile (Statistics Canada, 2023). The size and density of the Toronto real estate market will provide substantial data to support application of ML. The data on individual real estate condo transactions will be manually extracted from the Toronto Regional Real Estate Board (TRREB) Multiple Listing Service (MLS). TRREB provides reliable data on local real estate transactions, which is frequently used and cited by Statistics Canada and the CMHC. Anonymized data that contains no seller or buyer names or other personal identifiable information will be extracted. This is done to ensure compliance with the Personal Information Protection and Electronic Documents Act (PIPEDA, 2000).

Data on approximately 30,000 records representing the physical and measurable characteristics of condominium properties reported as sold in Toronto, from January 1, 2023, to August 31, 2025, collected from the TRREB MLS were used in this study. In addition to the property's measurable characteristics, the data included the property address, the sale date, and the sale price. Individual property addresses will be required for geo-coding and integration of spatial data. The transaction date will be required to facilitate the appropriate incorporation of macroeconomic factors and local market indicators, and the sales price will serve as the target variable for supervised learning in ML models.

Macroeconomic factors, namely, the Bank of Canada overnight lending rate (BOC), real Gross Domestic Product (GDP), Total Consumer Price Index (Total CPI) inflation, Consumer Price Index – Common (CPI-common) inflation, and national unemployment rate data will be extracted from datasets provided by Statistics Canada. This study uses two CPI measurements to capture different characteristics of inflation. While Total CPI measures inflation experienced by consumers, CPI-common measures inflation monitored by the Bank of Canada when setting the overnight rate. Total CPI inflation represents the year-over-year percentage change in the Total Consumer Price Index, while CPI-common represents the year-over-year percentage change in the CPI-common measure of underlying inflation. The unemployment rate is expressed as a percentage of the labor force. GDP is measured as real GDP at basic prices for all industries, in chained 2017 Canadian dollars. The overnight lending rate is provided daily and will be incorporated as a property attribute based on the corresponding sale date. Total CPI, CPI-common, GDP, and unemployment rates are reported monthly and will be merged with the dataset by assigning each macroeconomic value to all transactions recorded for a given month.

Additionally, features capturing the relationship between market activity and available supply will be engineered. For this purpose, a number representing the quantity of newly listed and remaining unsold properties available on the last day of the month will be extracted from TRREB's monthly market watch publication. These supply numbers will be examined in conjunction with the total number of sold properties for each corresponding month. The total number of sold properties will be calculated by summing the sold properties for the corresponding month in the dataset.

3.3 Exploratory Data Analysis

Exploratory Data Analysis (EDA) was conducted to assess data quality, variable distributions, and the applicability of ML approaches. EDA identified several issues, including missing values, the presence of special characters denoting currency, outliers, data inconsistencies, and the representation of property sizes as strings specifying the minimum and maximum sizes to which the true property size may be attributed. The identified issues were mitigated at the data preprocessing step.

3.4 Data Preprocessing

Before applying machine learning algorithms to a dataset, several preprocessing steps had to be taken to ensure the applicability of ML algorithms. Fields containing special characters or delimiters must be converted to numeric values. This can be applied to columns representing property sold price, maintenance fee and property tax accounts. Missing values must be identified and filled. The issues of size ranges used by real-estate boards to record transactions were resolved by transforming the property size range to an upper-bound size value. Entries identified as outliers during exploratory analysis were assessed and corrected. Outlier observations found to be erroneous or implausible were removed.

3.5 Software Selection

The development environment, programming software, and tools are selected based on their capability to handle extensive dataset manipulation and geocoding. Python was selected as the primary programming language due to its data handling capabilities and the availability of ML libraries. NumPy 2.0.2 libraries support data manipulation and numerical computations (Rajan et al., 2023). Geopy 2.4.1, along with the Nominatim API were used to perform geocoding and obtain latitude and longitude coordinates of each property (Fojtik et al., 2016). The Google Colab development environment was chosen for its accessibility, cloud-based Python execution, and to ensure uninterrupted extraction of geo coordinates. Matplotlib 3.10.0 and Seaborn 0.13.2 were used for data visualization and exploration (Oberoi et al., 2019), while Scikit-learn 1.6.1 provided functionality for feature scaling, cross-validation, and model building. Data scaling is applied using the MinMax Scaler procedure implemented in Scikit-learn library. To provide a complete picture of model performance, metrics will be reported as averages across several k-fold cross-validation runs, calculated using the Scikit-learn metrics module (Chai et al., 2014).

3.6 Selection and Application of ML Algorithms

The selection of ML algorithms is based on the nature of the problem, the dataset's suitability for regression-based prediction tasks, and the ability to learn relationships between property features and the target variable. For this study, a range of regression supervised learning algorithms were considered, including:

The Decision Tree Regressor (DT) was selected for its ability to provide a transparent, visual representation of decision-making logic behind the prediction results (Breiman et al., 1984).

The Random Forest Regressor (RF) was chosen for its ability to improve predictive performance through ensemble learning. By combining multiple decision trees into a single model, the random forest approach mitigates the overfitting issues often associated with individual decision trees, while enhancing model's consistency and accuracy of the estimates (Breiman, 2001).

The Gradient Boosting Regressor (GB) was selected for its ability to enhance overall predictive accuracy. This algorithm sequentially builds an ensemble of weak learners, where each new weak learner focuses on correcting the errors made by the combined ensemble of preceding learners, thereby improving overall predictive accuracy (Friedman, 2001).

The Multi-Layer Perceptron (MLP) neural network was chosen for its ability to learn a deeper, layered representation of data and to model complex, nonlinear, and high-dimensional relationships among features. This enables MLP to capture intricate, high-dimensional, and nonlinear feature interactions that tree-based methods may not fully learn (Rumelhart et al., 1986).

The M5P model tree algorithm was chosen for its hybrid structure. Quinlan (1992) introduced the M5 model tree concept, and Wang and Witten (1997) proposed the improved M5P implementation. M5P combines decision-tree partitioning with linear regression models at the terminal nodes, enabling the model to capture nonlinear relationships by dividing the data into regions where local linear models are most appropriate. As a result, M5P produces a pricewise linear approximation of price, rather than the pricewise constant predictions typically produced by standard regression decision trees.

Investigation of several algorithms is rationalized by the No Free Lunch (NFL) theorem (Wolpert & Macready, 1996). According to the NFL theorem, there is no universally superior algorithm across all problem settings. If an algorithm performs well on one task or even a dataset, it may fail on another one. Model performance depends on the characteristics of the underlying data and the problem. Consequently, the selected five algorithms will be used in the study to identify the most suitable one for the investigated problem.

3.7 Model Evaluation Strategy

Given the size and static nature of the dataset, a repeated cross-validation approach was selected to reduce the dependence of performance estimates on a single train–test random split and to provide more reliable estimates of out-of-sample models' predictive performance. This approach improves reliability of model evaluation by reducing the variance associated with a

single train–test split and providing a more stable estimate of model performance (Kohavi, 1995). The large number of available real estate transactions enables the dataset to be partitioned into multiple folds while maintaining sufficiently large training and testing subsets. For this study the dataset was randomly partitioned into ten approximately equal folds. During each iteration, one-fold will be used for testing while the remaining folds will be used for training (Figure 7). This approach will allow each fold to serve once as a test set and produce independent performance estimates. In this study, the entire procedure will be repeated five times using different random seeds for data partitioning, which will result in 50 independent model evaluations.

The performance of the models is reported as the average value across multiple training and testing runs to reduce the influence of random data partitioning and improve the reliability of the evaluation. This approach is supported by the Central Limit Theorem (CLT), which suggests that mean performance estimates become more stable and reliable as the number of repeated evaluations runs increases.

To measure the models' performance, the following metrics will be used: Relative Mean Absolute Error (RMAE), Root Mean Squared Error (RMSE), Relative Root Mean Squared Error (RRMSE) and Mean Absolute Percentage Error (MAPE). Including both MAPE and RMAE is necessary to provide a more complete interpretation of model performance, to allow evaluation from perspectives of low-end and high-end properties.

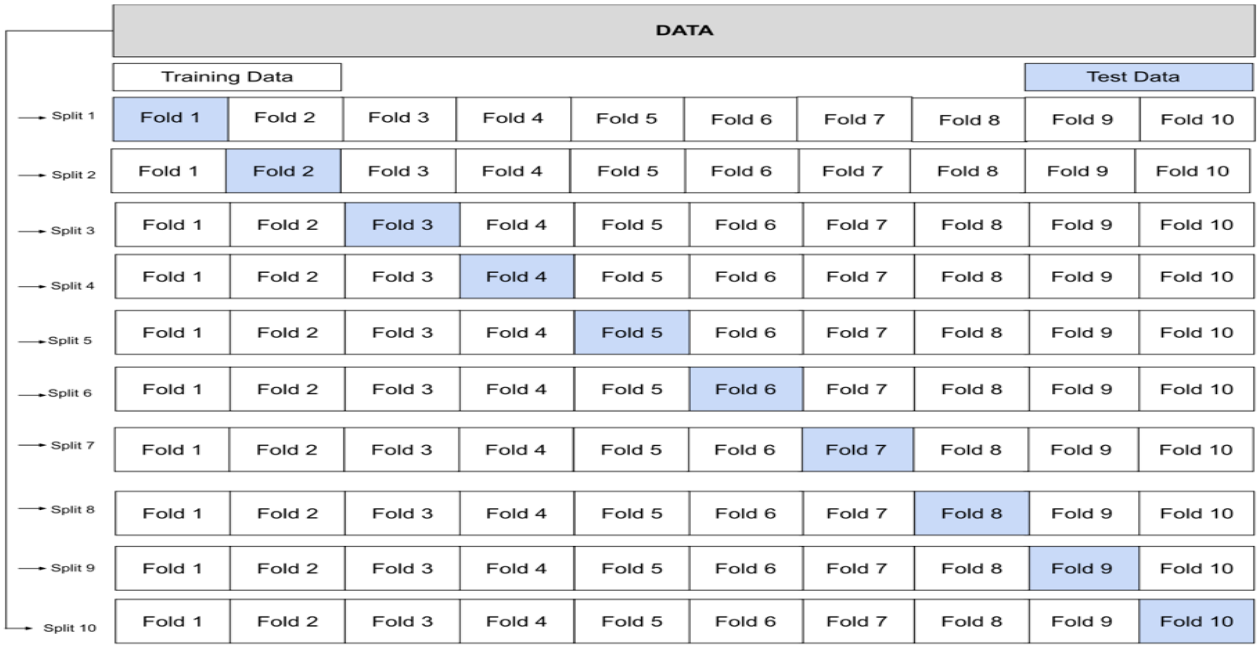

Figure 7. Single Iteration of 10-Fold Cross-Validation

Note. Adapted from *Cross-validation: Evaluating Estimator Performance*, in the *scikit-learn User Guide* (n.d.).

RMAE will be used to show the proportion of error compared to the sold price of the target and to estimate models' sensitivity to significant errors as seen in (1) (Hyndman et al., 2006). Another aspect for choosing (RMAE) is the metric's ability to better reveal understanding of model performance than Mean Absolute Error (MAE) fails (Chai et al., 2014).

$$RMAE = \frac{\sum_{i=1}^{n}|y_i - \hat{y}_i|}{\sum_{i=1}^{n}|y_i|} \quad (1)$$

where: $y_i = actual\ value,\ \hat{y}_i = predicted\ value,\ n = number\ of\ observations$

Root Mean Squared Error (RMSE), as seen in (2), was chosen due to theoretical relevance to statistical modeling, and to estimate models' sensitivity to significant errors (Hyndman et al., 2006).

$$RMSE = \sqrt{\frac{1}{n}\sum_{i=1}^{n}(y_i - \hat{y}_i)^2} \quad (2)$$

where: $y_i = actual\ value, \hat{y}_i = predicted\ value,\ n\ = number\ of\ observations$

Relative Root Mean Squared Error,

$$RRMSE = \frac{RMSE}{\bar{y}} = \frac{\sqrt{\frac{1}{n}\sum_{i=1}^{n}(y_i - \hat{y}_i)^2}}{\bar{y}} \quad (3)$$

$$where: \bar{y}\ mean\ of\ actual\ values, y_i\ actual\ value, \hat{y}_i\ predicted\ value, n\ number\ of\ observations$$

Mean Absolute Percentage Error (MAPE) is chosen to show the absolute percentage difference between predicted and actual value.

$$MAPE = \frac{100}{n}\sum_{i=1}^{n}\left|\frac{y_i - \hat{y}_i}{y_i}\right| \quad (4)$$

where: $y_i\ actual\ value,\ \hat{y}_i\ predicted\ value,\ n\ is\ a\ number\ of\ observations$

The coefficient of determination R^2, measures the predictive performance of a regression model relative to model predicting the mean of the observed values.

$$R^2 = 1 - \frac{\sum_{i=1}^{n}(y_i - \hat{y}_i)^2}{\sum_{i=1}^{n}(y_i - \bar{y})^2} \quad (5)$$

$$where: y_i\ actual\ value,\ \hat{y}_i\ \ predicted\ value,\ \overline{y}\ \ mean\ of\ the\ actual\ value, n\ is\ a\ \ number\ of\ obeservations$$

3.8 Experiment Settings

The intention is to estimate how model accuracy changes as the dataset is progressively enriched, moving from basic MLS variables to feature sets that include spatial information, engineered predictors, and macroeconomic factors.

In Experiment 1, a baseline model will be established by training and evaluating machine-learning algorithms on the set of features limited only to basic property characteristics. The first set of models will be developed on cleaned and preprocessed data from the MLS repository, containing measurable, tangible characteristics, i.e., number of bathrooms, number of bedrooms, number of dens, number of garage parking spaces, amount of monthly maintenance fees, amount of annual property taxes, number of kitchens, and property size.

Experiment 2 evaluates the impact of spatial information on models' performance. Using the same algorithms, evaluation metrics, and validation procedure, the second set of models will be trained and tested on MLS transactional data that represent basic property characteristics, enriched with spatial features. Spatial variables, namely latitude and longitude associated with

each property location are calculated based on the property address and are included into a set of predictors.

Experiment 3 conducted to understand the importance of macroeconomic factors. For this purpose, the third set of models will be trained and tested on MLS transactional data that represent basic property characteristics enriched with spatial features and combination of macroeconomic factors reported for Canada. These macroeconomic factors will include nationally reported indicators: the Bank of Canada overnight lending rate (BoC), Total CPI, CPI-common, Gross Domestic Product (GDP), and the unemployment rate. Experiment 3 will use the same algorithms, evaluation metrics, and validation procedure employed in Experiments 1 and 2.

Experiment 4 evaluates the importance of individual local market indicators and assesses the ability of machine learning algorithms to capture local market dynamics. For this purpose, the fourth set of models is trained, tested, and validated using the procedure employed in Experiments 1, 2, and 3 on MLS transactional data representing basic property characteristics, enriched with spatial features, macroeconomic factors reported for Canada, and one local market feature at a time. The local market features include both raw indicators and engineered indicators. Raw local market indicators are number of sales, number of new listings, and number of unsold properties remaining on the market as active listings. Throughout the remainder of this thesis, these indicators are referred to as Sales, New Listings, and Active Listings, respectively.

The engineered features are Month of Inventory (MOI), New-to-Active Listings (NtoA), and Absorption Rate (AR). Each engineered feature represents Toronto condominium market conditions during the period in which the property was sold.

Specifically:

MOI is defined as the number of Active Listings still unsold on the last day of month divided by the number Sales in that same month:

$$MOI = \left(\frac{Active\ Listings}{Sales}\right) \tag{6}$$

NtoA represents the ratio of New Listings entering the market relative to existing Active Listings:

$$NtoA = \left(\frac{New\ Listing}{Active\ Listings}\right) \tag{7}$$

AR represents the rate at which available inventory is absorbed by the market,

$$AR = \left(\frac{Sales}{Active\ Listingsh}\right) \quad (8)$$

Experiment 5 tests the ability of models trained on data from all investigated property size categories to estimate values of individual real estate sales of apartments from the most popular category. The models will be trained using historical transaction data and tested on previously unseen transactions. Data from January 1, 2023, to August 31, 2025, will be used for training, and data for transactions that have occurred after August 31, 2025, and before January 1, 2026, for testing. Performance will be assessed at the individual transaction level.

Experiment 6 evaluates the predictive performance of models operating within the most popular size category. This experiment examines whether focusing on a more homogeneous market segment improves model performance. Experiment 6 will be conducted on the same algorithms, evaluation metrics, and the validation procedure employed in Experiments 1, 2, 3 and 4.

Experiment 7 evaluates the ability of models trained on the most common property transaction segment to predict individual real-world property transaction values within that segment using previously unseen data. Filtered to commonly occurring property size transactions occurring between January 1, 2023, and August 31, 2025, will be used for training, and data for transactions that have occurred between September 1, 2025, and December 31, 2025, for testing. This out-of-sample evaluation is designed to assess the models' generalization ability and their capacity to generate accurate predictions for future transactions in the market using the most active size property segment. To provide a direct measure of prediction accuracy for each tested transaction, performance will be assessed at the individual transaction level using APE% as in experiment 5.

Chapter 4: The Experiments and Results

4.1 Exploratory Data Analysis

The experiments followed the data preprocessing and EDA steps. EDA revealed the presence of extremely low and high property prices. To examine the relationship between property size category and sale price, basic statistics of the price were calculated for each category (Table 1).

Table 1

Property categories in the investigated dataset.

Property Size Range (sq.ft.)	Upper Bond Size	Number of transactions	Percentage (%)	Average Price ($)	Median Price ($)	Minimum Price ($)	Maximum Price ($)
0-499	499	1747	5.7	494804	491000	22000	1600000
500-599	599	4563	14.9	560701	553000	220000	988000
600-699	699	6006	19.61	613042	615000	14825	1135000
700-799	799	4300	14.04	672450	675000	280000	1465000
800-899	899	3478	11.35	731394	730000	240000	1560000
900-999	999	2713	8.86	731752	725000	40000	1620000
1000-1199	1199	3734	12.19	781941	732500	26611	1975000
1200-1399	1399	2013	6.57	851864	738000	290000	2375000
1400-1599	1599	876	2.86	1082381	957000	330000	3450000
1600-1799	1799	469	1.53	1311575	1175000	370000	3237000
1800-1999	1999	277	0.9	1554399	1478000	360000	4200000
2000-2249	2249	187	0.61	1930438	1703000	790000	4500000
2250-2499	2499	120	0.39	2393665	2200000	725000	6345000
2500-2749	2749	36	0.12	2777653	2612500	1350000	6750000
2750-2999	2999	42	0.14	3100333	2815000	910000	8400000
3000-3249	3249	24	0.08	3054125	2788500	1090000	5600000
3250-3499	3499	16	0.05	3955375	2981500	1480000	9775000
3500-3749	3749	5	0.02	3663000	4200000	1990000	5275000
3750-3999	399	6	0.02	5723833	5500000	3769000	9150000
4000-4249	4249	3	0.01	6086667	6050000	6000000	6210000
4250-4499	4499	5	0.02	6520600	7000000	4850000	7600000

After examining Table 1 and checking the corresponding transactions in the collected data, a mislabeled transaction has been identified. These mislabeled transactions produced extreme outliers, such as garage spaces labeled as condo transactions, leading to extremely small spaces being recorded as sold at extremely high prices. Interquartile Range (IQR) method proposed by John Tukey (1977) was applied to identify and consequently remove such transactions from the dataset. By arranging transactions from the same category in ascending order by transaction value and then identifying four equal groups representing the four quarters of the data, the IQR was

calculated as the difference between the sold prices in quartile three (Q3) and quartile one (Q1). Transactions with property values less than Q1 - 1.5*IQR were identified as extreme outliers below lower-bond and removed from the dataset. Transactions with property values above Q3+1.5*IQR were identified as extreme high outliers above upper-bond and removed from the dataset. The resulting categories of the original dataset and their basic statistics are presented in Table 2.

Table 2

Property Ranges and Corresponding Maximum Values for Property Sizes after IQR filtering.

Property Size Range (sq.ft.)	Upper Bond Size	Number of Properties	Percentage (%)	Average Price ($)	Median Price ($)	Minimum Price ($)	Maximum Price ($)
0-499	499	1741	6.12	494621	491000	240000	980000
500-599	599	4563	16.03	560701	553000	220000	988000
600-699	699	6003	21.09	613289	615000	209800	1135000
700-799	799	4288	15.07	670949	674000	280000	1130000
800-899	899	3415	12	721695	725000	240000	1135000
900-999	999	2631	9.25	716295	718000	240000	1135000
1000-1199	1199	3315	11.65	719678	690000	264000	1136000
1200-1399	1399	1603	5.63	711219	662000	290000	1135000
1400-1599	1599	535	1.88	783163	755000	330000	1137000
1600-1799	1799	224	0.79	877886	870000	370000	1135000
1800-1999	1999	87	0.31	841250	840000	360000	1135000
2000-2249	2249	24	0.08	957162	972000	790000	1103000
2250-2499	2499	17	0.06	995095	1025000	725000	1125000

To understand the temporal behavior of external features, variables representing the macroeconomic and local economic environments associated with real estate transactions were plotted against transaction dates. These variables change over time rather than across individual properties, and individual features across all transactions on the same date share the same values.

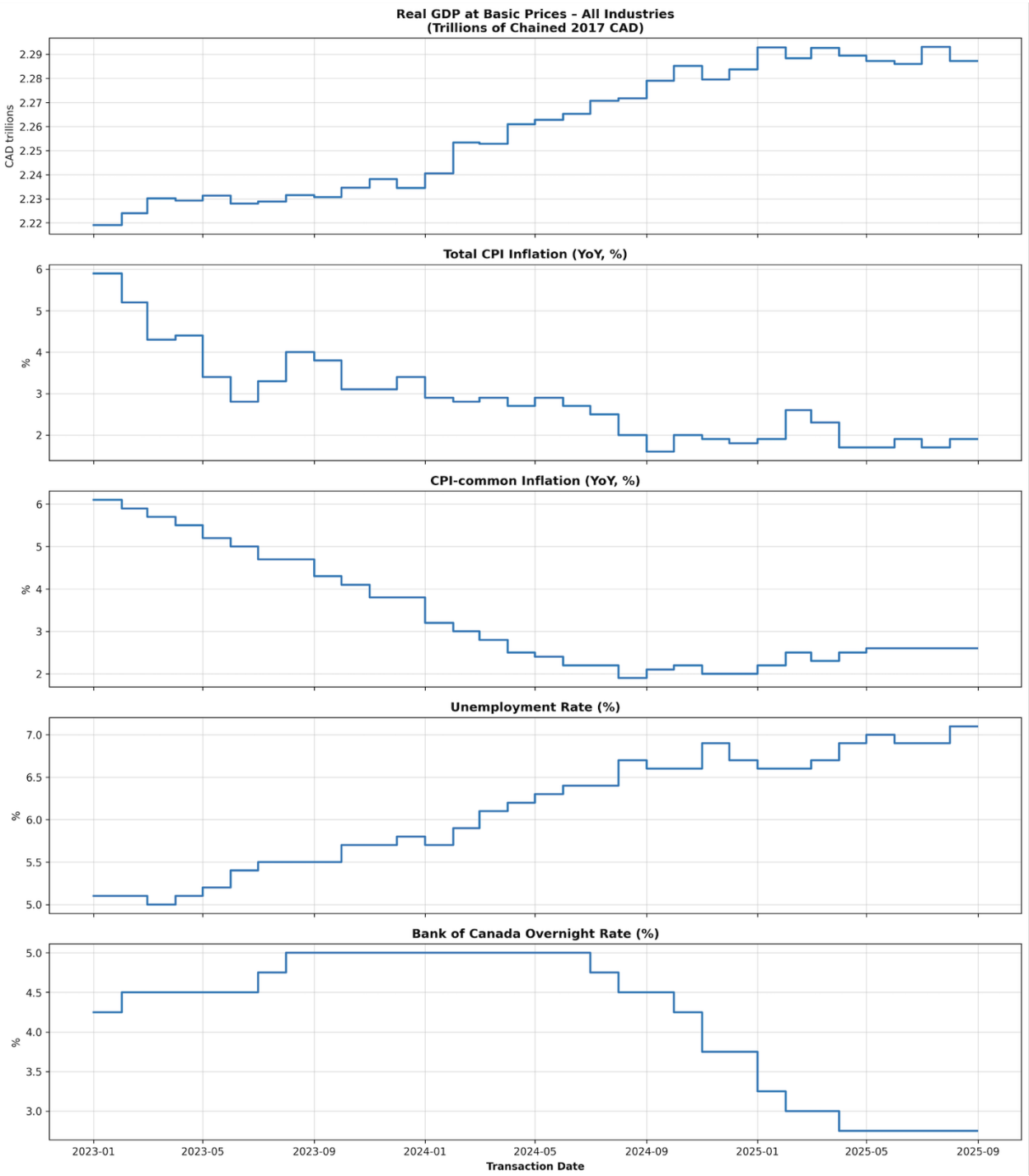

Figure 8. Temporal Trends in Macroeconomic Factors.

Note. GDP represents real GDP at basic prices for all industries and is displayed in trillions of chained 2017 Canadian dollars. Total CPI and CPI-common represent year-over-year percentage changes. The unemployment rate and Bank of Canada overnight rate are expressed as percentages.

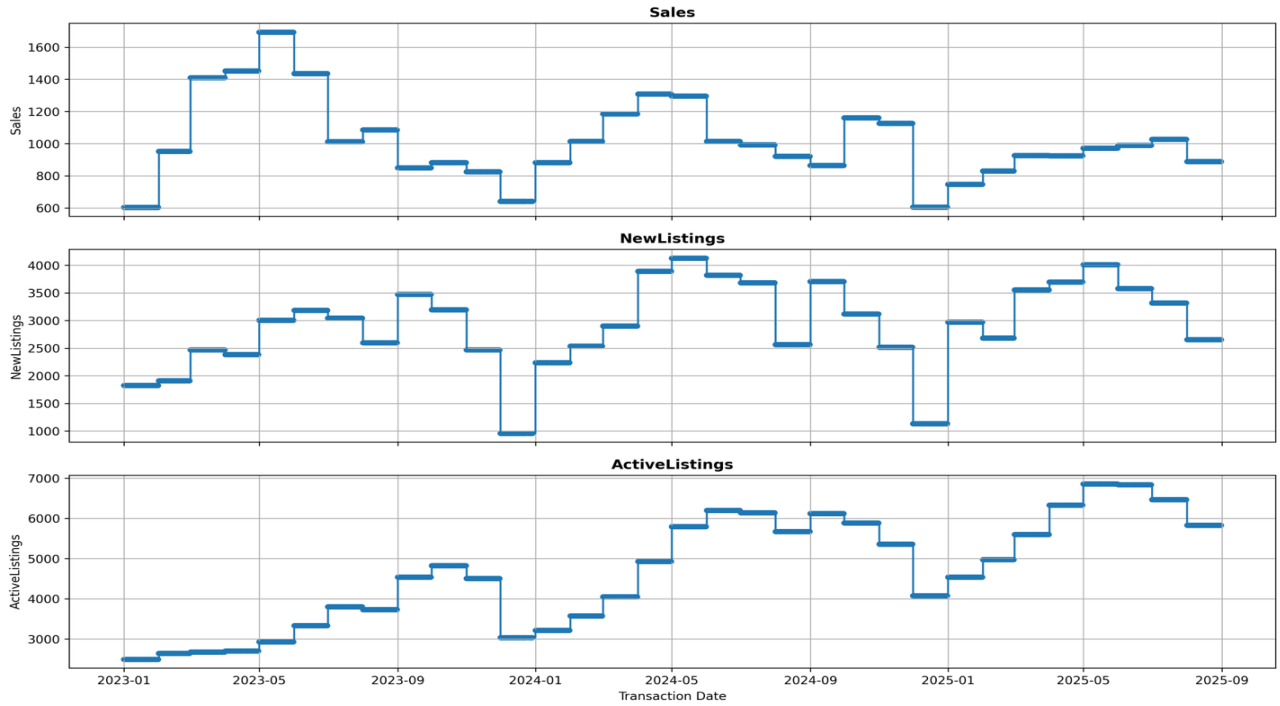

Figure 9. Temporal Trends in Local Market Indicators.

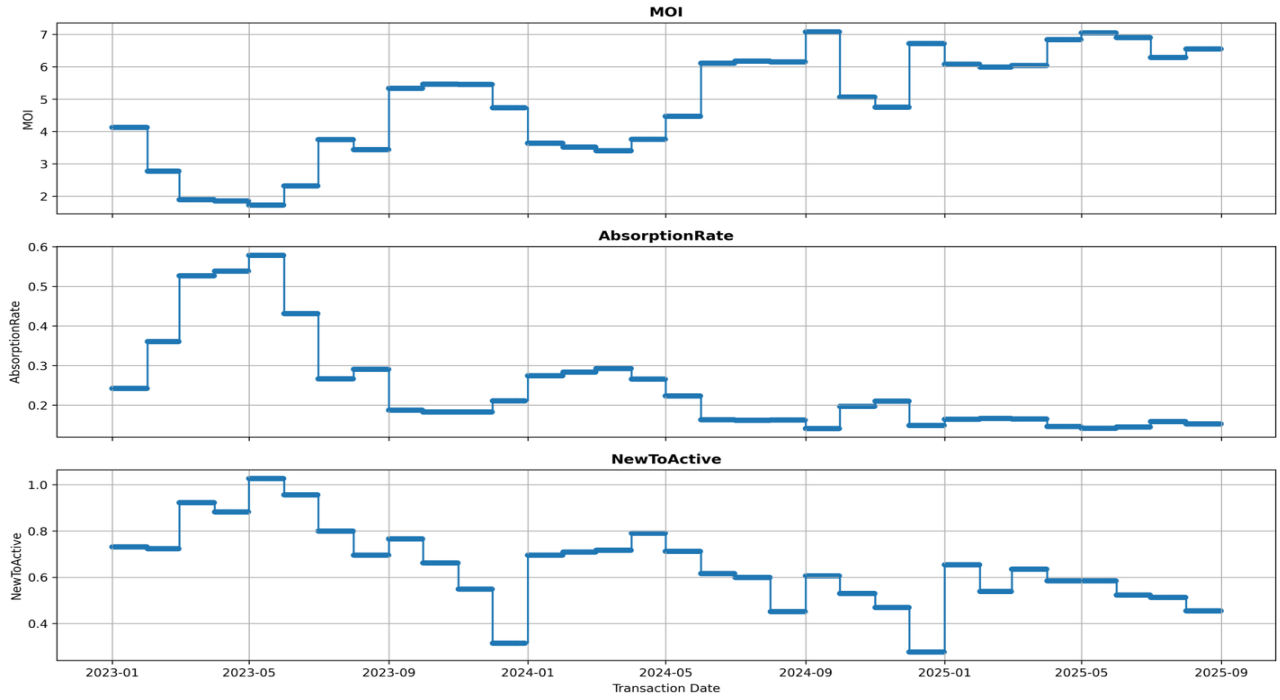

Figure 10. Temporal Trends in Features Engineered using Local Market Indicators.

To improve readability, the variables were grouped into three categories: macroeconomic factors in (Figure 8), local market indicators in (Figure 9), engineered local market indicators in (Figure 10).

To further investigate relationships among external variables and transaction prices, Pearson correlation analysis was conducted. The resulting heatmap, provides visual representation of linear associations between Sold Price, macroeconomic indicators, and local market indicators in (Figure 11).

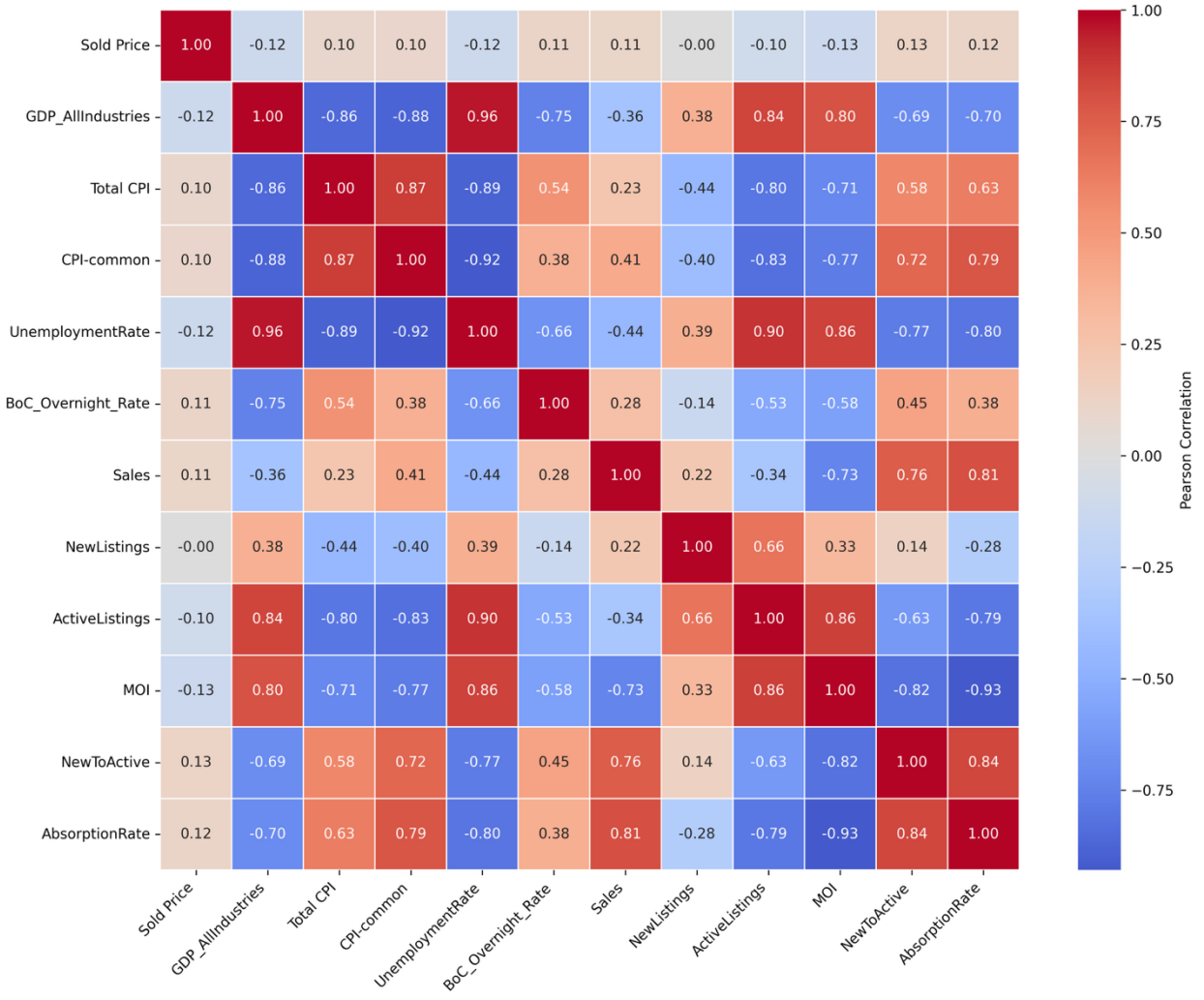

Figure 11. Pearson Correlation Coefficients between Sold Price, Macroeconomic indicators, and Local Market indicators.

The Pearson correlation heatmap shows that external variables, while correlated with one another, exhibit weak linear correlations with the corresponding transaction's sale price in the

investigated dataset. Strong correlations among macroeconomic factors, particularly between GDP All Industries, CPI-common, Total CPI, and the unemployment rates corresponding to real estate transactions. Also, we can notice a correlation between raw local market conditions indicators, such as the number of Active listings, and macroeconomic factors, while the correlation between macroeconomic factors and the number of sales and new listings remains very low. In particular, a Pearson correlation coefficient of 0.9 between the national unemployment rate and the number of active listings on the market can be observed and noted. MOI and NtoA also exhibit notable correlations with several macroeconomic indicators. This is expected, as both features are engineered to incorporate the number of Active Listings on the market at the time of the transaction, along with the number of Sales and New Listings, respectively.

4.2 Experiment Description

Models developed in Experiment 1 use measurable property characteristics as predictors. The accuracy of sale-price predictions was calculated using Decision Trees (DT), Random Forests (RF), Gradient Boosting (GB), Multilayer Perceptron (MLP), and M5P, which were established baselines for model performance. A snapshot of the dataset is shown in Figure 12.

MLS#	Sold Price	Bathrooms	Bedrooms	Den	Garage Parking Spaces	Maintenance	Taxes	Kitchens	Upper Bound Size
C5852391	557000.0	1.0	1.0	0.0	1.0	342.86	1756.77	1.0	499.0
C5840641	565000.0	1.0	1.0	1.0	1.0	507.94	1921.08	1.0	599.0
C5821442	468888.88	1.0	0.0	0.0	0.0	413.19	1832.6	1.0	599.0
E5822349	505000.0	1.0	1.0	1.0	1.0	520.0	1500.0	1.0	799.0
W5792181	545000.0	2.0	2.0	0.0	1.0	1209.3	2154.89	1.0	1399.0
C5840824	690000.0	2.0	2.0	1.0	1.0	1000.45	1908.44	1.0	999.0

Figure 12. Excerpt from the dataset highlighting the features used in Experiment 1.

The Decision Tree (DT) model achieved an RMAE of 0.1141, an RMSE of $101,244, an RRMSE of 0.1550, a MAPE of 11.52%, and an R^2 of 0.5741. The Random Forest (RF) model achieved an RMAE of 0.0869, an RMSE of $76,371, an RRMSE of 0.1169, a MAPE of 8.80%, and an R^2 of 0.7577. The Gradient Boosting (GB) model achieved an RMAE of 0.0896, an RMSE of $76,730, an RRMSE of 0.1175, a MAPE of 9.16%, and an R^2 of 0.7555. The Multilayer Perceptron (MLP) model achieved an RMAE of 0.0934, an RMSE of $80,296, an RRMSE of 0.1229, a MAPE of 9.50%, and an R^2 of 0.7321. The M5P model achieved an RMAE of 0.0890, an RMSE of $76,718, an RRMSE of 0.1175, a MAPE of 9.05%, and an R^2 of 0.7555. These values were used as the baseline benchmark for comparison in subsequent experiments.

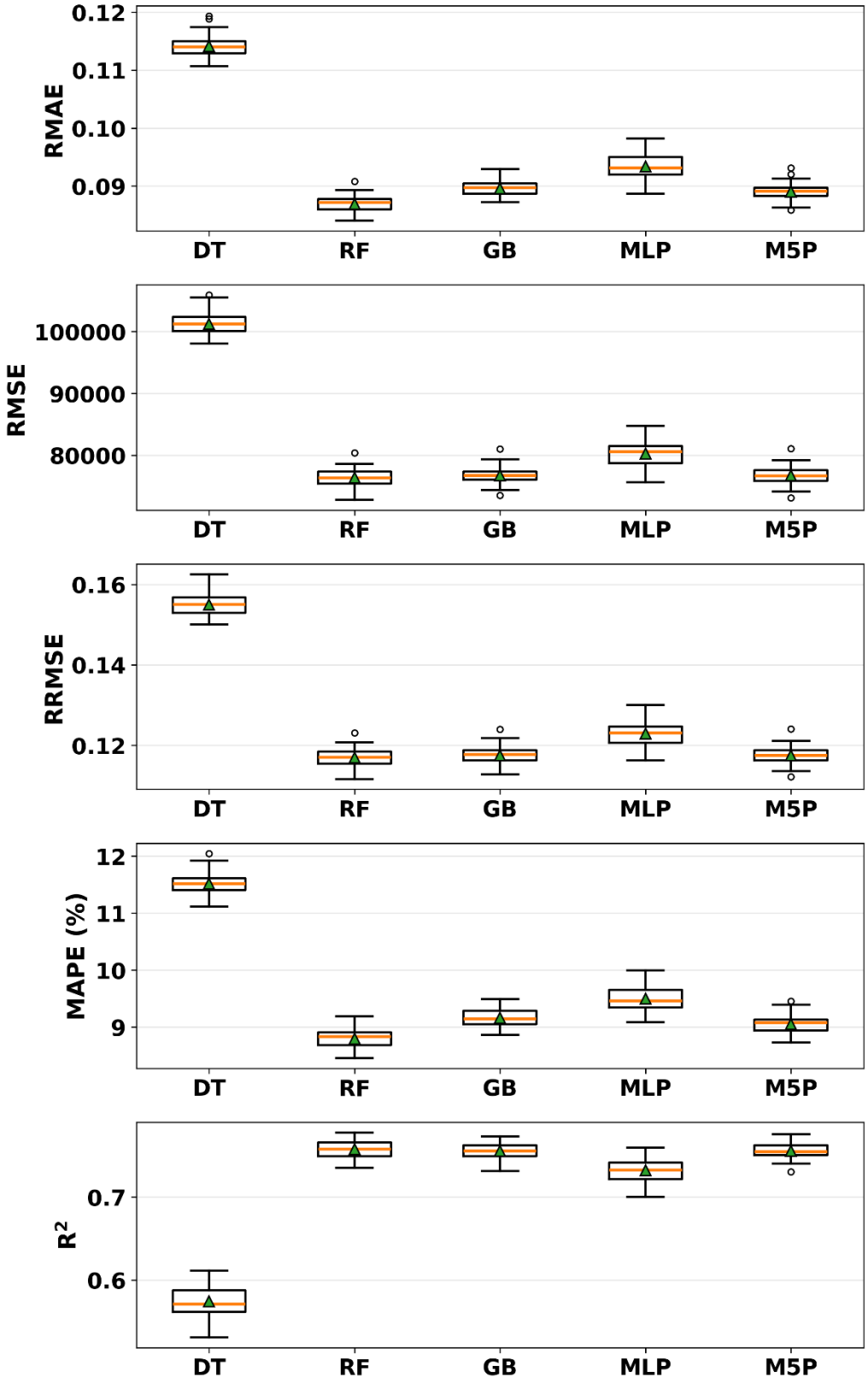

Figure 13. Boxplots of Model Performance in Experiment 1.

Note. Figure 13 shows performance for each model using boxplots constructed based on metrics recorded for each fold. The orange horizontal line represents the median performance, and the green triangle denotes the mean performance across observations. This is done to allow comparison of the typical and average performance for each model. The height of each box corresponds to the interquartile range (IQR), which represents the middle 50% of observations and indicates the variability in model performance. Narrower boxes indicate more stable performance across folds, whereas wider boxes indicate greater variability. Empty circles beyond the whiskers represent outlier among predicted values. The whiskers extend to the most extreme values within 1.5 × IQR from the quartiles, and values outside this range are displayed as outliers.

To measure the importance of spatial data and capture neighborhood characteristics, the second experiment was conducted. A set of models was trained and tested on MLS data enriched with spatial features. While spatial features do not describe the neighborhood, their inclusion will enable a machine learning model to learn location-dependent patterns from the transaction data. A snapshot of the dataset with emphasis on the features used in Experiment 2 is shown in Figure 14.

MLS#	Sold Price	Bathrooms	Bedrooms	Den	Garage Parking Spaces	Maintenance	Taxes	Kitchens	Upper Bound Size	Latitude	Longitude
C5852391	557000.0	1.0	1.0	0.0	1.0	342.86	1756.77	1.0	499.0	43.7740492	-79.3295139
C5840641	565000.0	1.0	1.0	1.0	1.0	507.94	1921.08	1.0	599.0	43.7677129	-79.3706245
C5821442	468888.88	1.0	0.0	0.0	0.0	413.19	1832.6	1.0	599.0	43.6586996	-79.3844316
E5822349	505000.0	1.0	1.0	1.0	1.0	520.0	1500.0	1.0	799.0	43.7809725	-79.2498068
W5792181	545000.0	2.0	2.0	0.0	1.0	1209.3	2154.89	1.0	1399.0	43.634842	-79.5394853
C5840824	690000.0	2.0	2.0	1.0	1.0	1000.45	1908.44	1.0	999.0	43.726123	-79.3114417

Figure 14. Excerpt from the dataset highlighting the features used in Experiment 2.

The average performance metrics for each model are presented and compared with those established in the Experiment 1 baseline, as shown in Table 3.

These results demonstrate that inclusion of spatial variables can provide valuable information in addition to measurable property characteristics, thereby enabling models to better capture neighborhood and location effects that influence condominium sale prices.

Table 3
Model Performance Comparison (Exp 1: measurable Property Features only vs. Exp2: measurable and Spatial Property Features)

Model	Experiment	RMAE	RMSE	RRMSE	MAPE (%)	R^2
DT	Base	0.1141	101,244	0.155	11.52	0.5741
DT	**Base + Spatial**	**0.0981**	**88,956**	**0.1362**	**9.9**	**0.6713**
RF	Base	0.0869	76,371	0.1169	8.8	0.7577
RF	**Base + Spatial**	**0.0739**	**65,472**	**0.1002**	**7.5**	**0.8219**
GB	Base	0.0896	76,730	0.1175	9.16	0.7555
GB	**Base + Spatial**	**0.0867**	**74,169**	**0.1135**	**8.9**	**0.7715**
MLP	Base	0.0934	80,296	0.1229	9.5	0.7321
MLP	**Base + Spatial**	**0.0925**	**79,142**	**0.1212**	**9.42**	**0.7398**
M5P	Base	0.089	76,718	0.1175	9.05	**0.7555**
M5P	**Base + Spatial**	**0.0868**	**76,529**	**0.1172**	**8.86**	0.7542

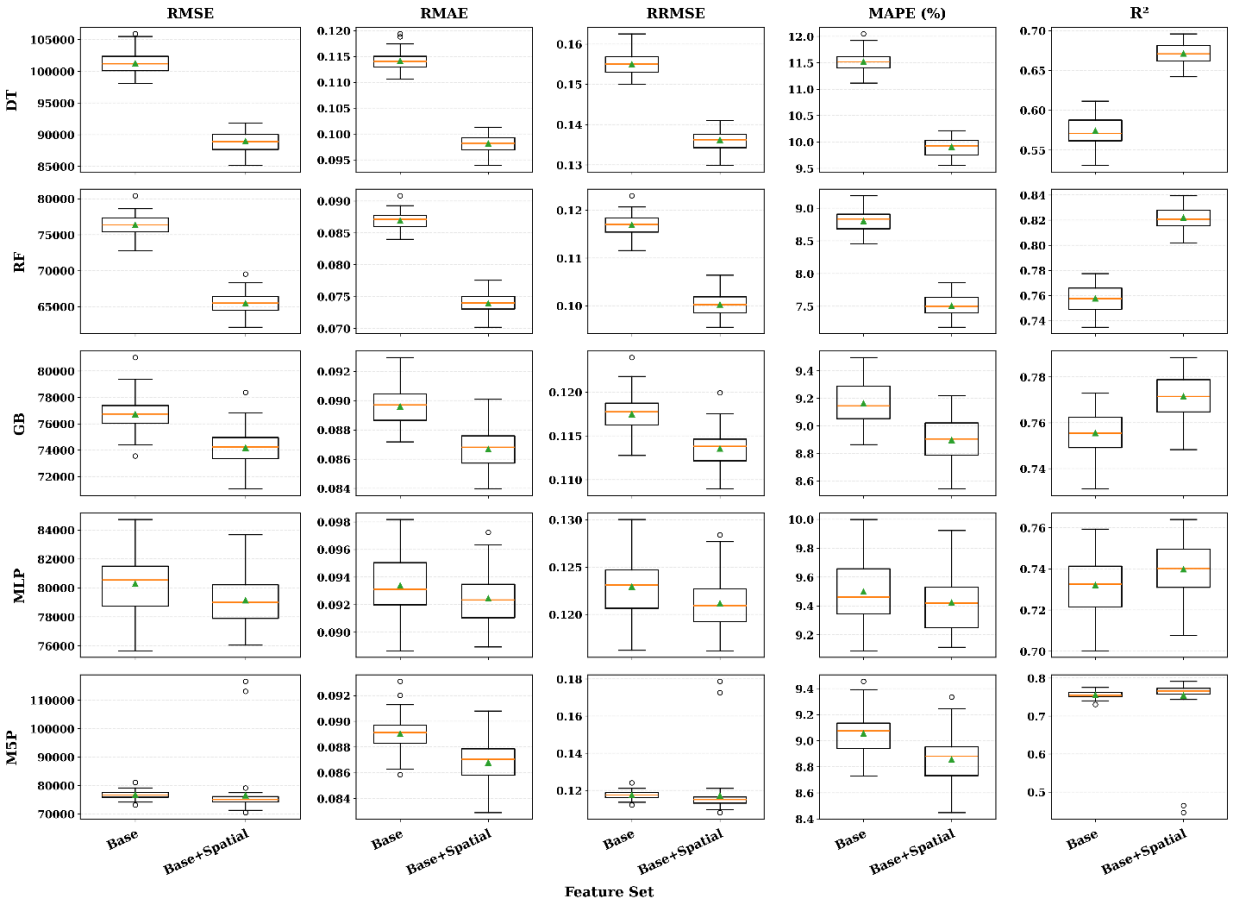

Figure 15. Metrics Comparison between Experiment 1 and Experiment 2.

As shown in Table 3, the inclusion of spatial variables improved predictive performance for all evaluated models. For the Decision Tree (DT) model, MAPE (%) decreased from 11.52% to 9.90%, while RMSE declined from 101,244 to 88,956 and R^2 increased from 0.5741 to 0.6713.

The Gradient Boosting (GB) model also showed improvements, with MAPE (%) decreasing from 9.16% to 8.90%, RMSE declining from 76,730 to 74,169, and R^2 increasing from 0.7555 to 0.7715. Similarly, the M5P model achieved a reduction in MAPE (%) from 9.05% to 8.86%, with RMSE decreasing slightly from 76,718 to 76,529, while R^2 changed marginally from 0.7555 to 0.7542.

The Multilayer Perceptron (MLP) model also benefited from the inclusion of spatial features, with MAPE (%) improving from 9.50% to 9.42%, RMSE decreasing from 80,296 to 79,142, and R^2 increasing from 0.7321 to 0.7398.

The Random Forest (RF) model experienced the largest overall improvement, reducing MAPE (%) from 8.80% to 7.50%, lowering RMSE from 76,371 to 65,472, and increasing R^2 from 0.7577 to 0.8219. To visualize and compare model performance between Experiment 1 and Experiment 2, boxplots were constructed from the recorded performance values presented in Figure 15.

To evaluate the effect of macroeconomic indicators on a property value, Experiment 3 was conducted. 33 datasets were constructed using all possible combinations of five macroeconomic factors along with basic measurable property features and basic spatial features. All five selected ML algorithms were trained on these datasets to develop sale price estimation models.

To summarize and analyze aggregated results for each combination of a dataset and an algorithm, the mean values of the performance metric and interquartile range (IQR) were computed and visualized using line plot (Figures 16-20).

Figures 16 -20 shows that adding macroeconomic variables can improve the models' predictive performance. However, incorporating all available indicators doesn’t necessarily constitute a better model. As seen in Figure 16-20, while multiple equally good models exist in terms of accuracy, models trained on datasets incorporating a few carefully selected macroeconomic factors can consistently achieve accuracy comparable to that of models trained on datasets containing a greater number of features.

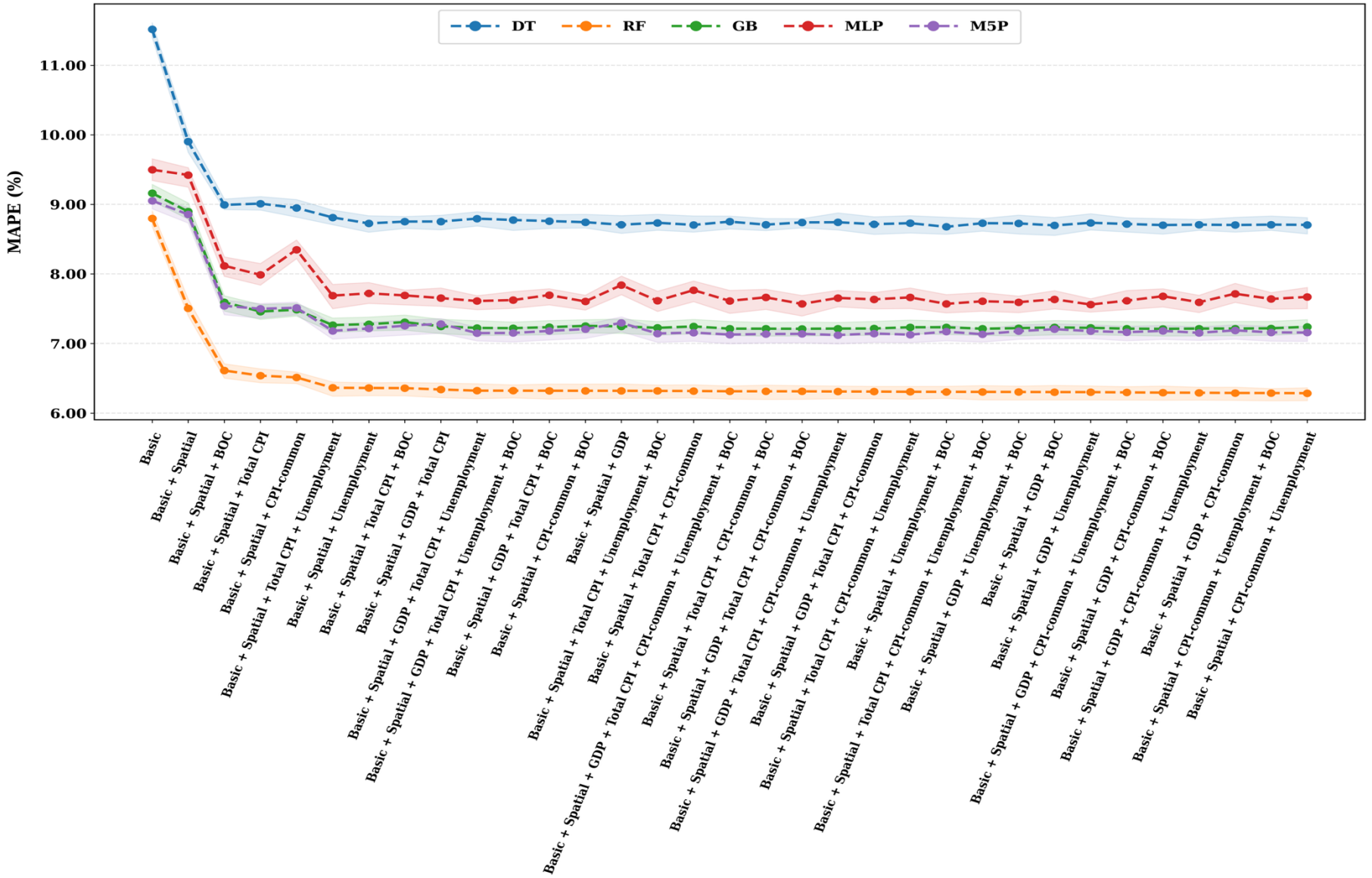

Figure 16. MAPE (%) with Q1–Q3 Ranges Across Models Using Different Macroeconomic Feature Combinations (Experiment 3).

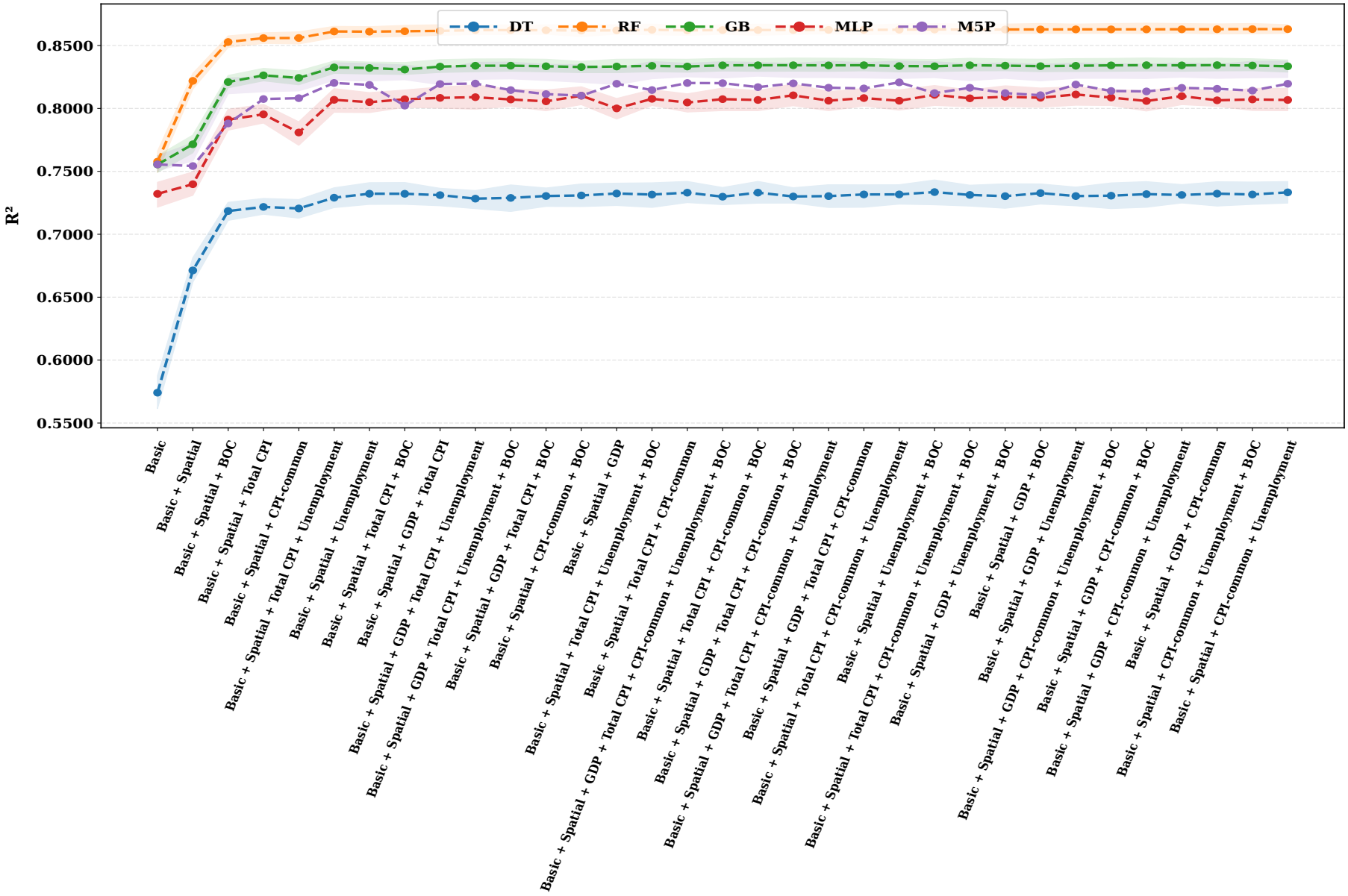

Figure 17. Mean R^2 with Q1–Q3 Ranges Across Models Using Different Macroeconomic Feature Combinations (Experiment 3).

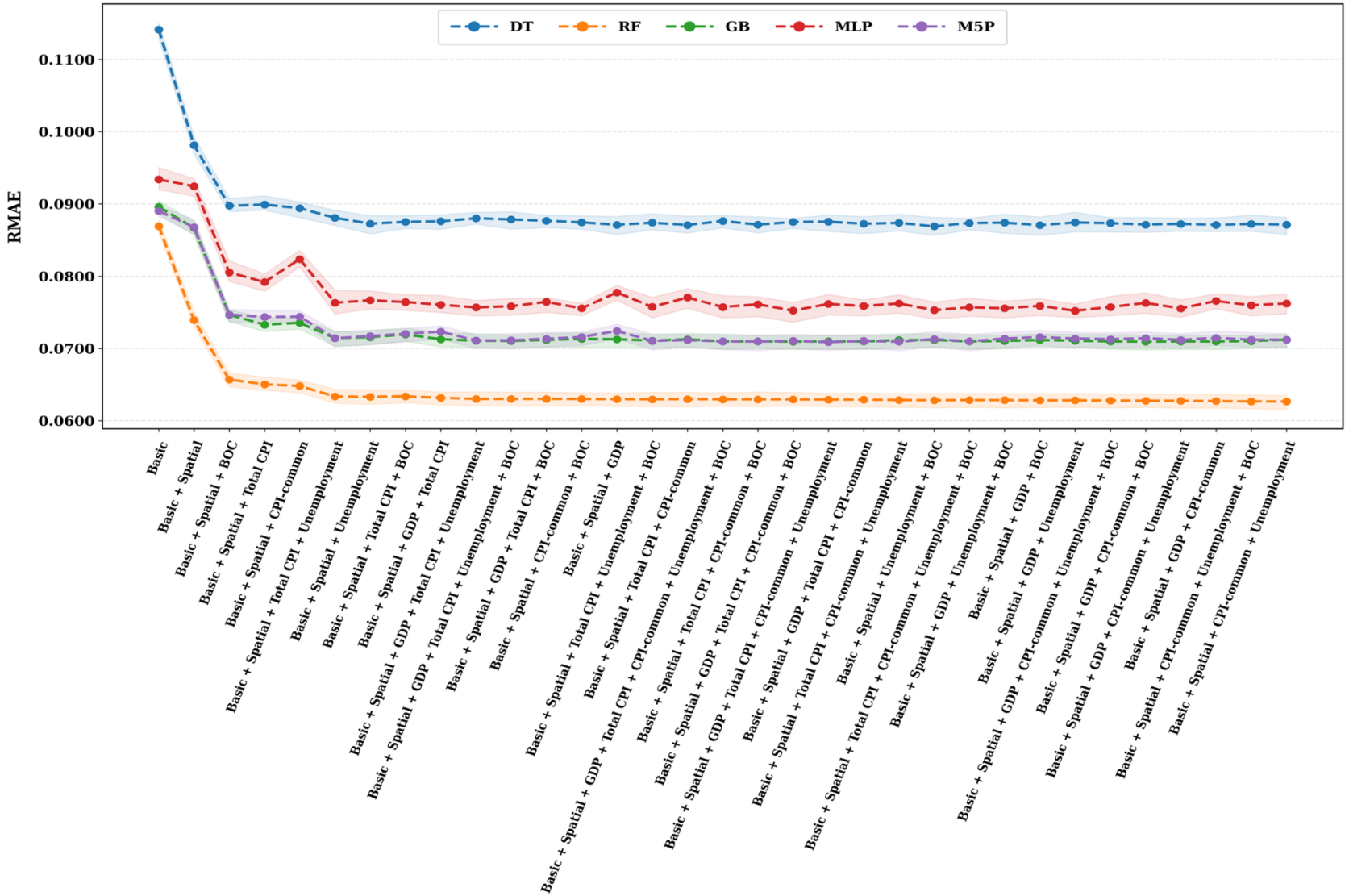

Figure 18. RMAE: Mean RMAE and Interquartile Ranges (Q1–Q3) Across Models for Different Macroeconomic Feature Combinations (Experiment 3).

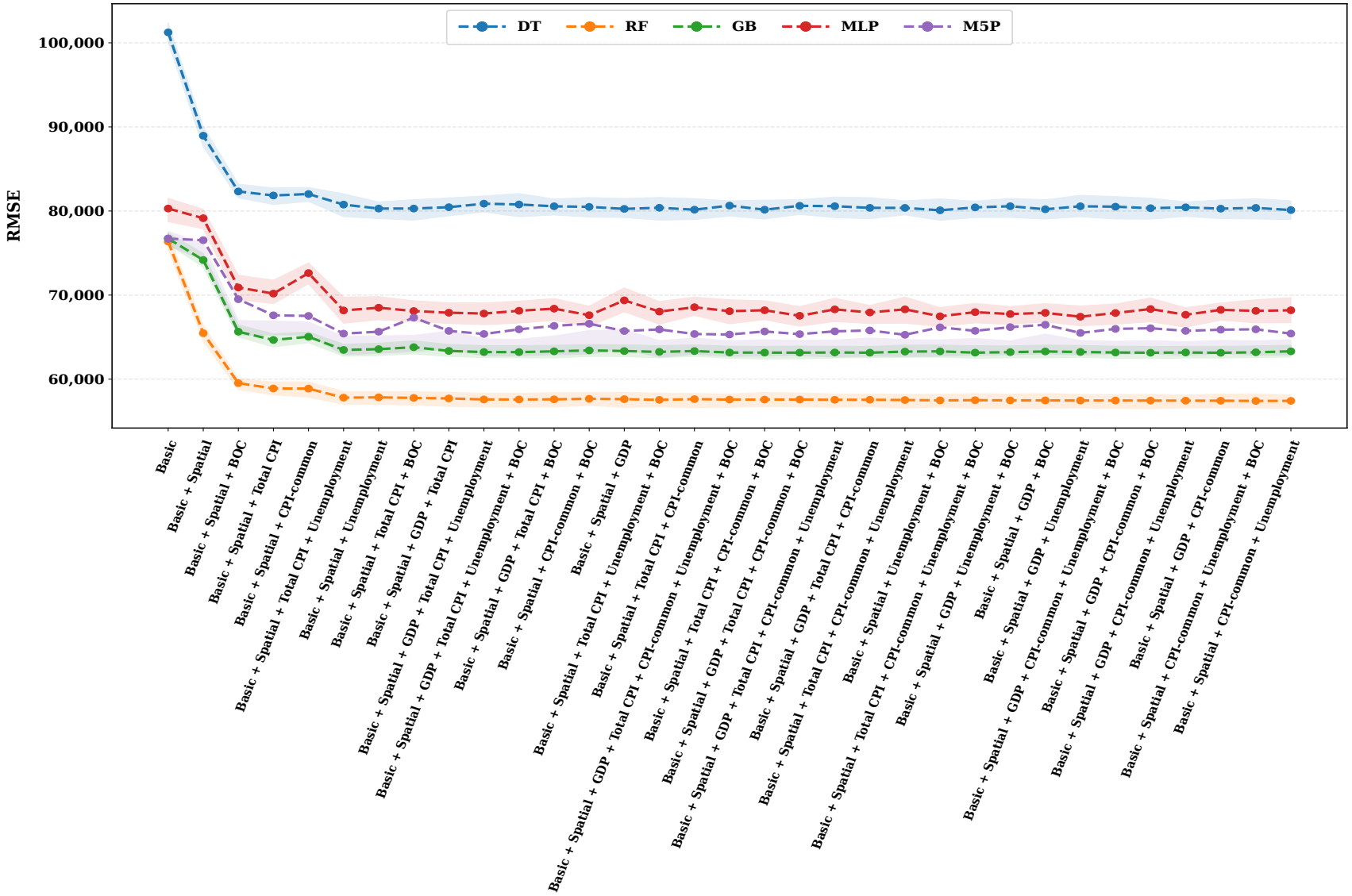

Figure 19. Mean RMSE and Interquartile Ranges (Q1–Q3) Across Models for Different Macroeconomic Feature Combinations (Experiment 3).

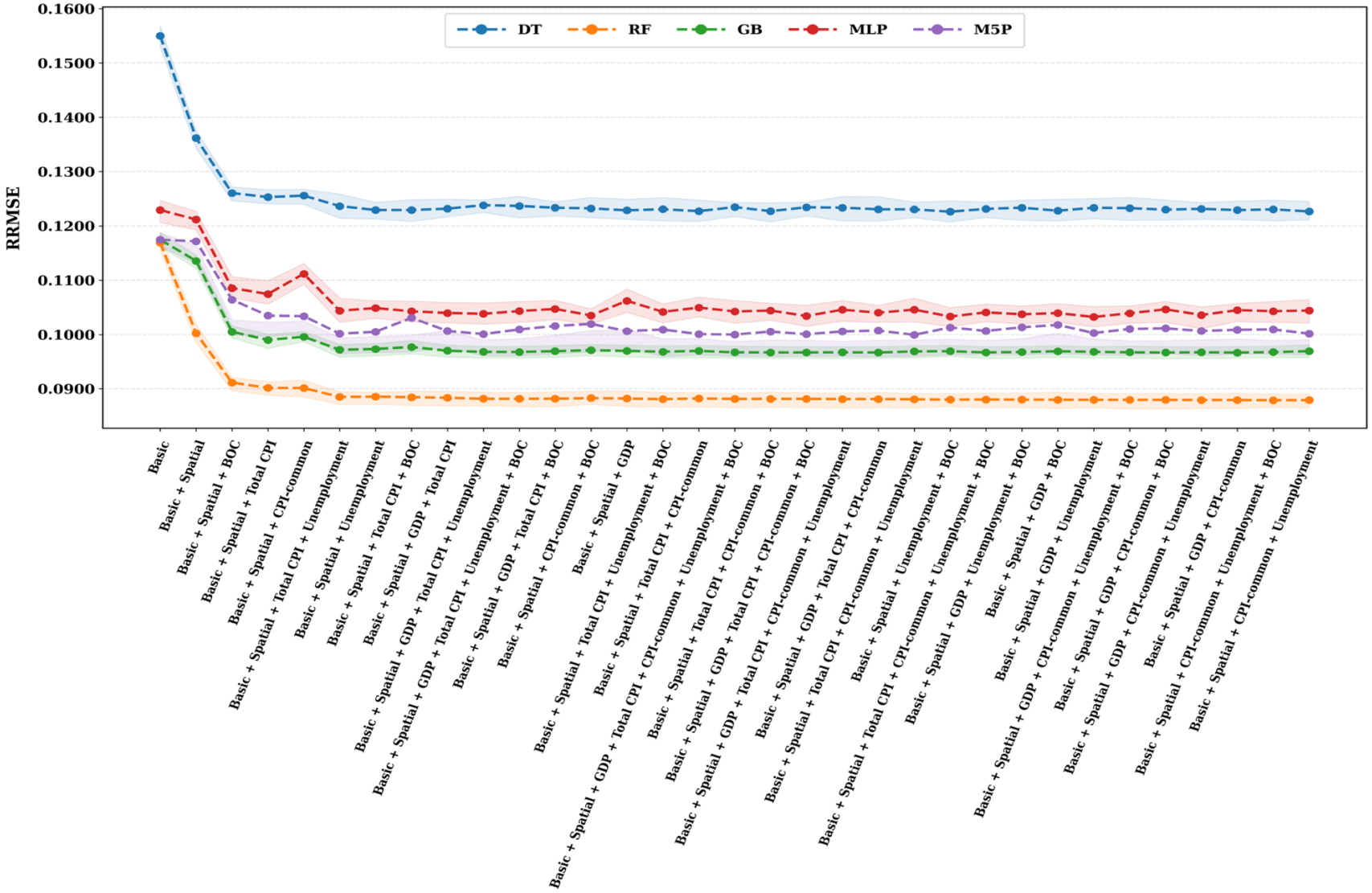

Figure 20. Mean RRMSE and Interquartile Ranges (Q1–Q3) Across Models for Different Macroeconomic Feature Combinations (Experiment 3).

Experiment 4 evaluates the effect of local market conditions on the property evaluation process. The objective of this experiment is to assess how the inclusion of local market indicators and their derived features affect the predictive performance of sale price models.

For this purpose, in addition to the basic dataset from Experience 1 and spatial dataset from Experiment 2, each of the 31 macroeconomic dataset configurations from Experiment 3 were extended by incorporating either one raw local market indicator or one feature engineered using local market indicators. Each combination set from experiment 3 was augmented by one of three raw local market indicators or one of three engineered features. Across the baseline, baseline–spatial, six spatial-local market indicators configurations, and 31 macroeconomic configurations, a total of 194 dataset combinations were generated (Figure 21). Dataset construction workflow is shown in Figure 22.

Sale price evaluation models were developed and tested on augmented datasets. The complete results of Experiments 1–4 are provided in the Appendix B.

Figures 23-28 illustrate the effect of each single local real estate market indicator on model performance using. The results presented in Figures 23-28 were evaluated using the mean value of the performance metric and the IQR, and they show that including different local market indicators results in different levels of improvement in model performance. Results show that the features engineered from local market indicators are more important for model accuracy than the raw local market indicators themselves.

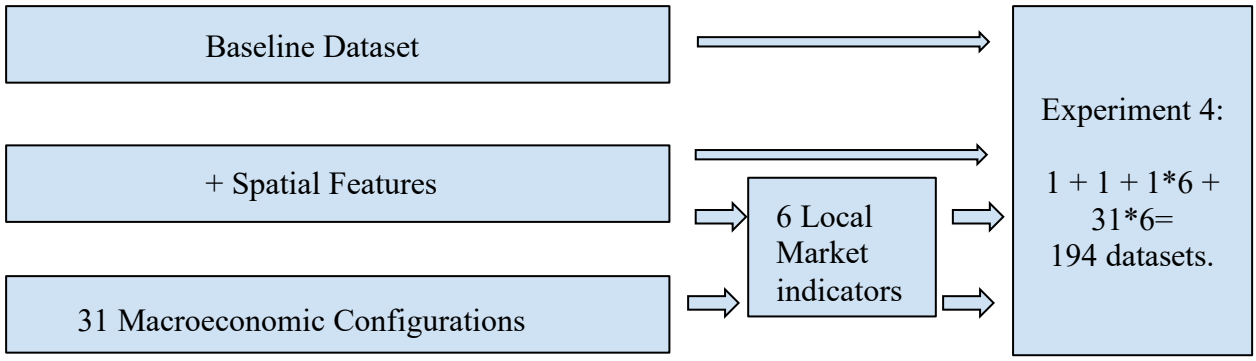

Figure 21. Overview of Dataset Construction for Experiment 4.

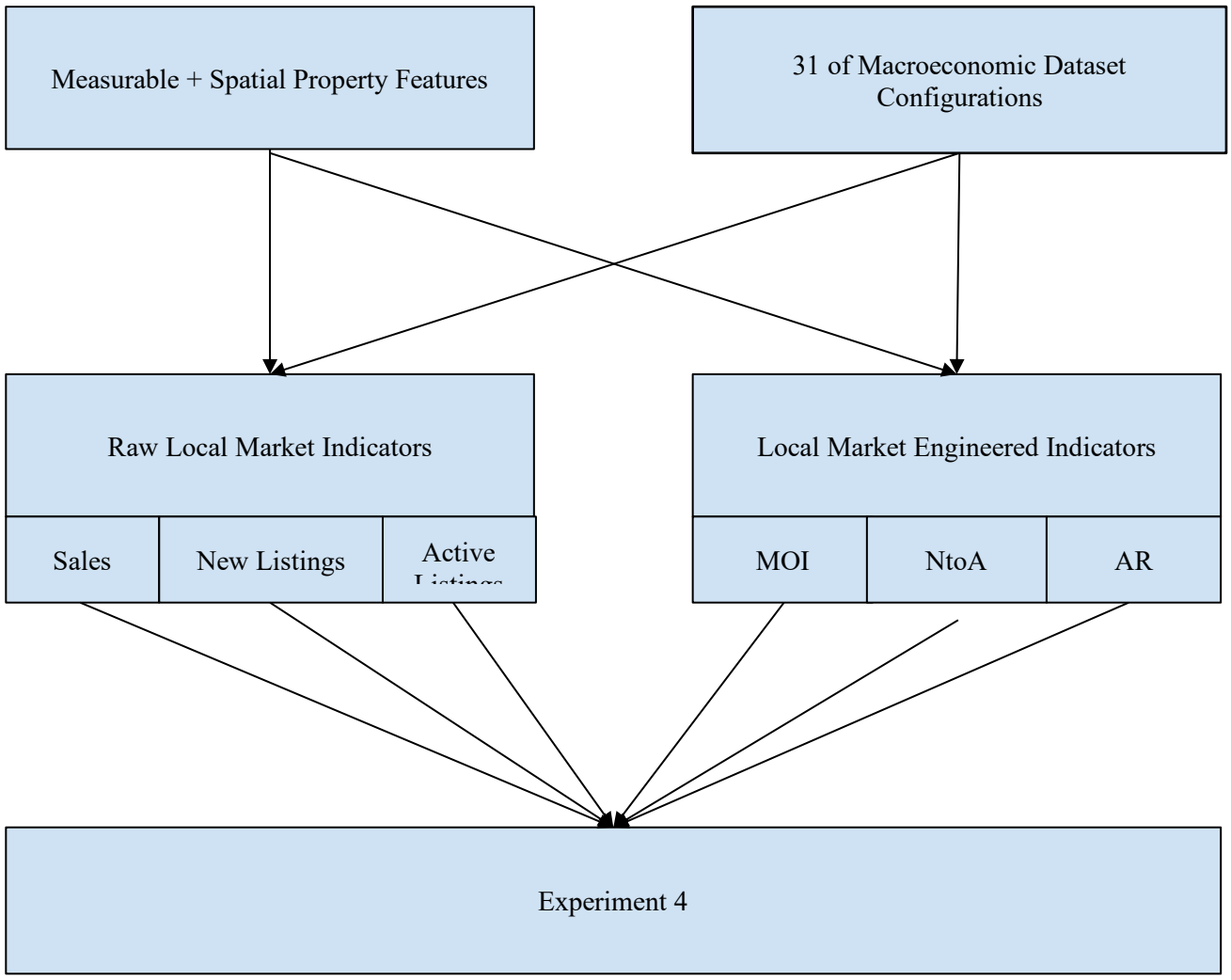

Figure 22.Dataset Construction Workflow for Experiment 4.

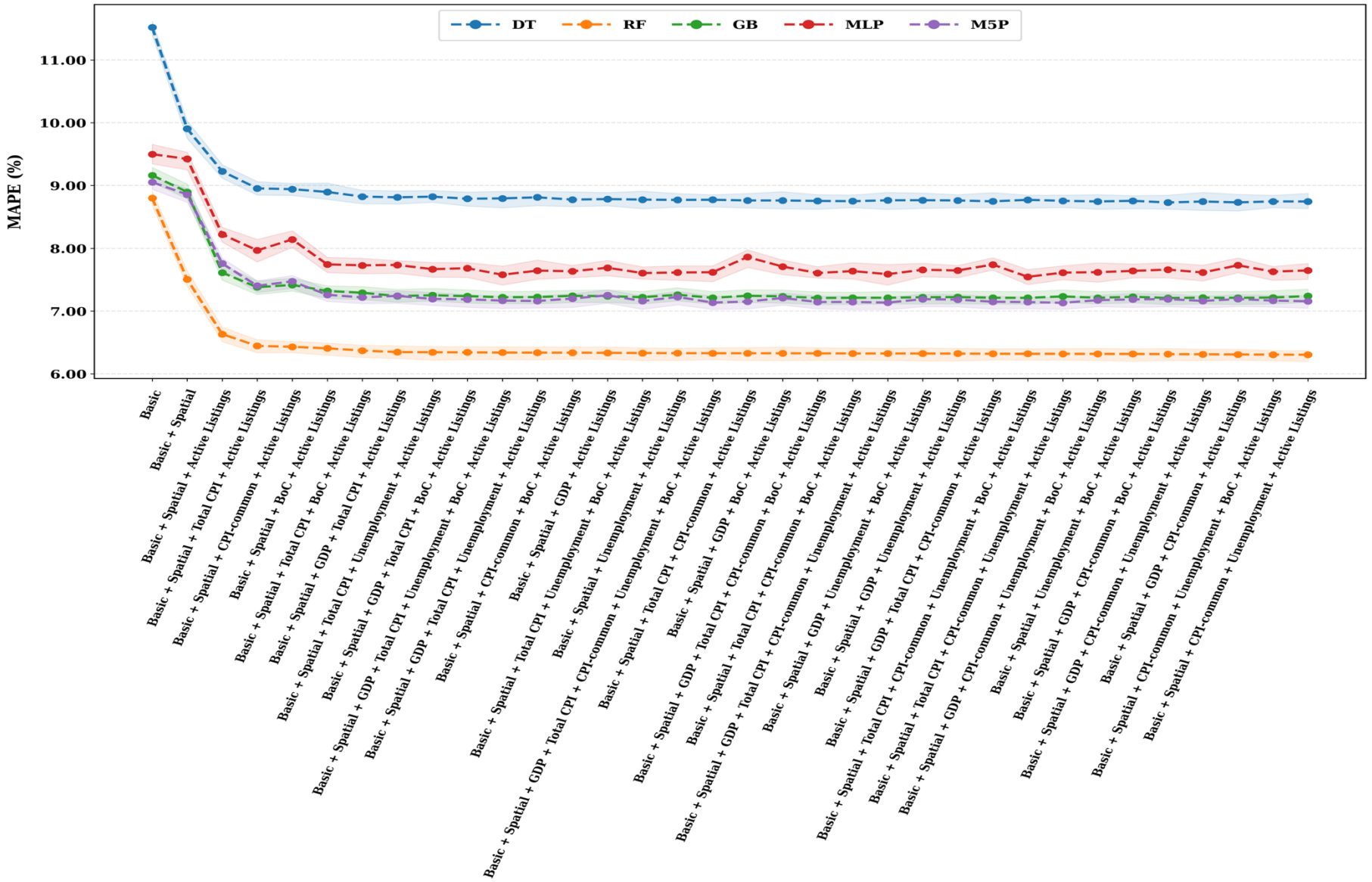

Figure 23. Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment 1 and Experiment 2 Baselines and All Experiment 4 Feature Configurations Using the Active Listings Local Market Indicator.

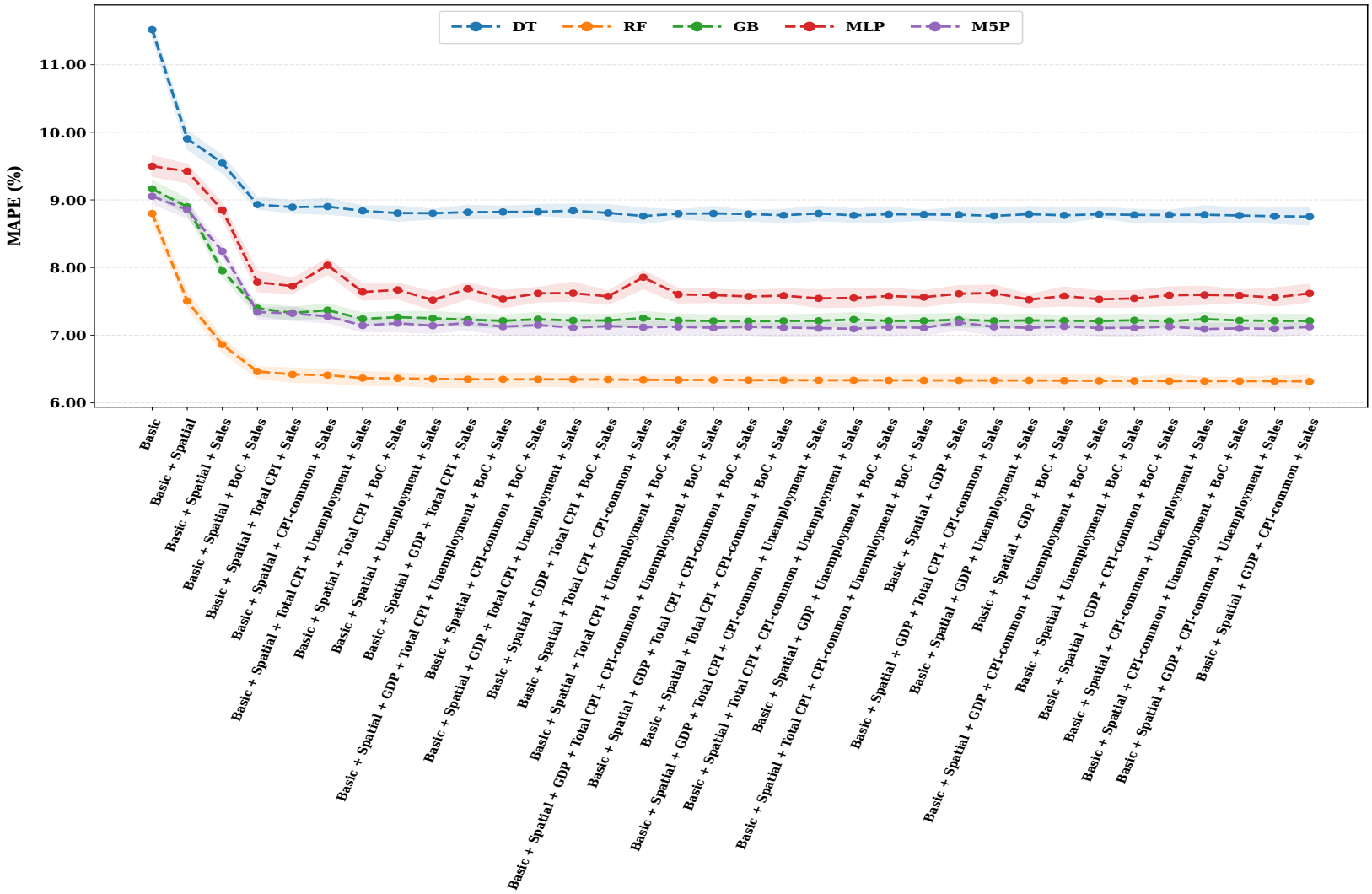

Figure 24. Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment 1 and Experiment 2 Baselines and All Experiment 4 Feature Configurations Using the Sales Local Market Indicator..

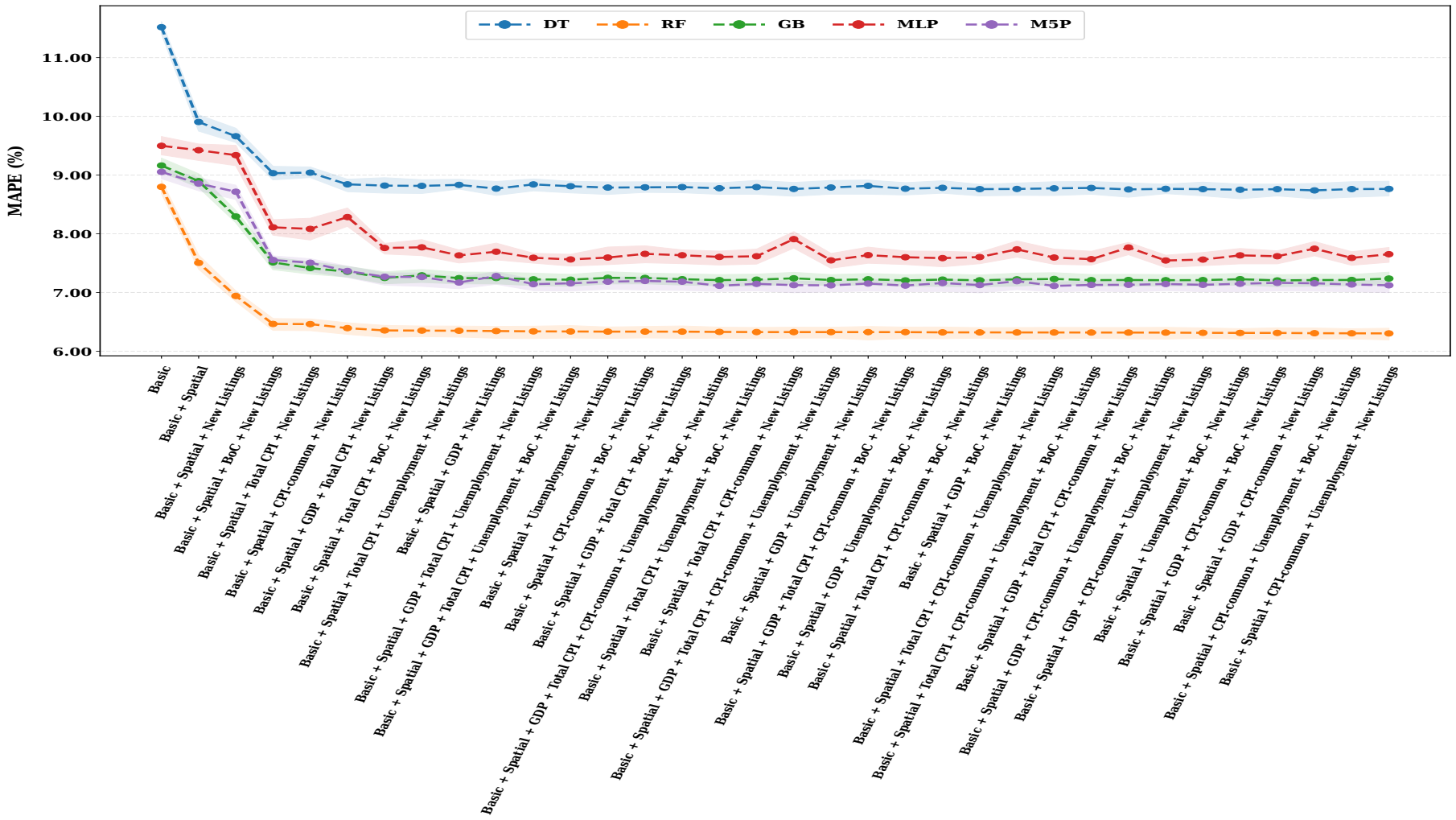

Figure 25. Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment 1 and Experiment 2 Baselines and All Experiment 4 Feature Configurations Using the New Listings Local Market Indicator.

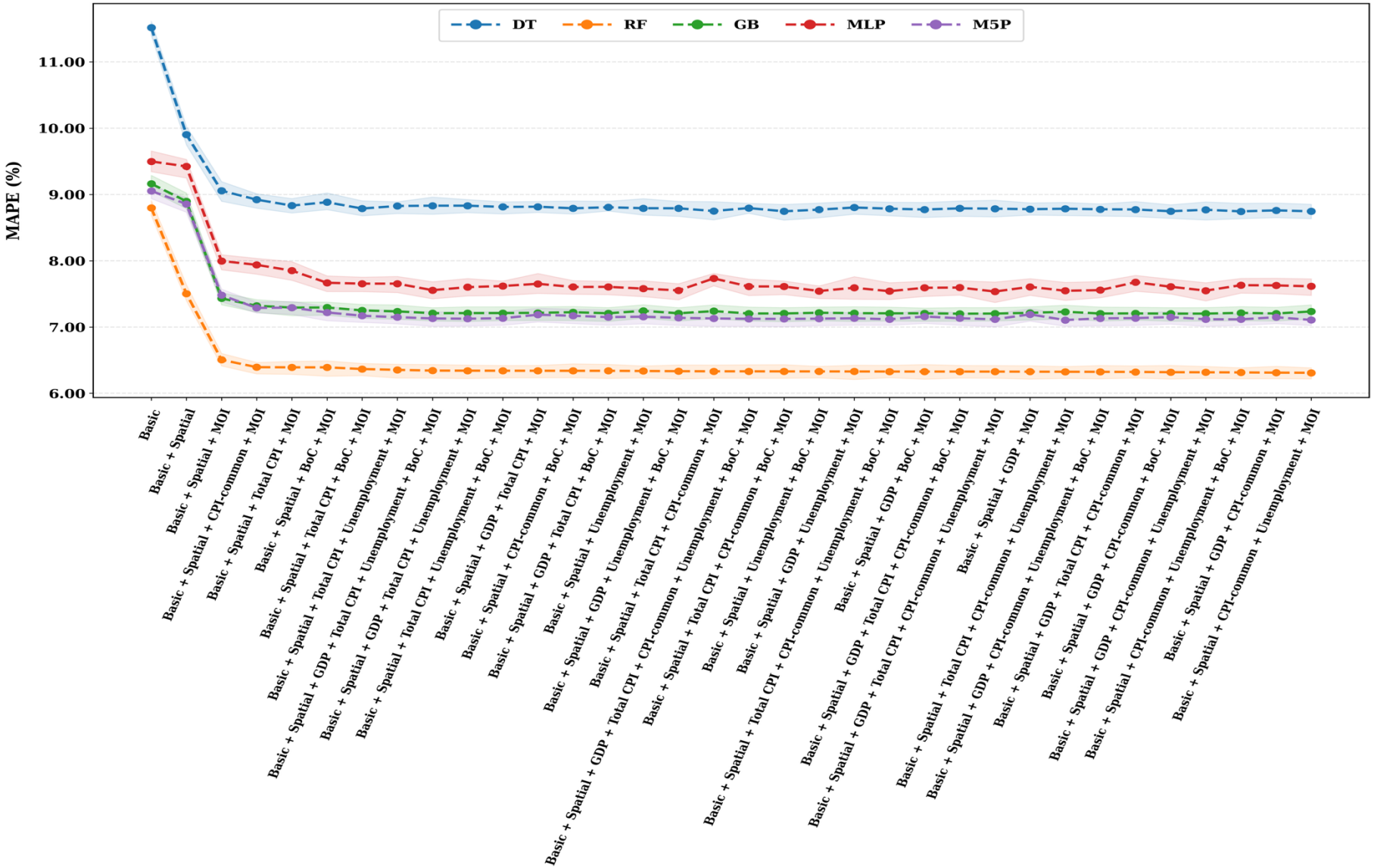

Figure 26. Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment 1 and Experiment 2 Baselines and All Experiment 4 Feature Configurations Using the Month of Inventory (MOI) Local Market Indicator.

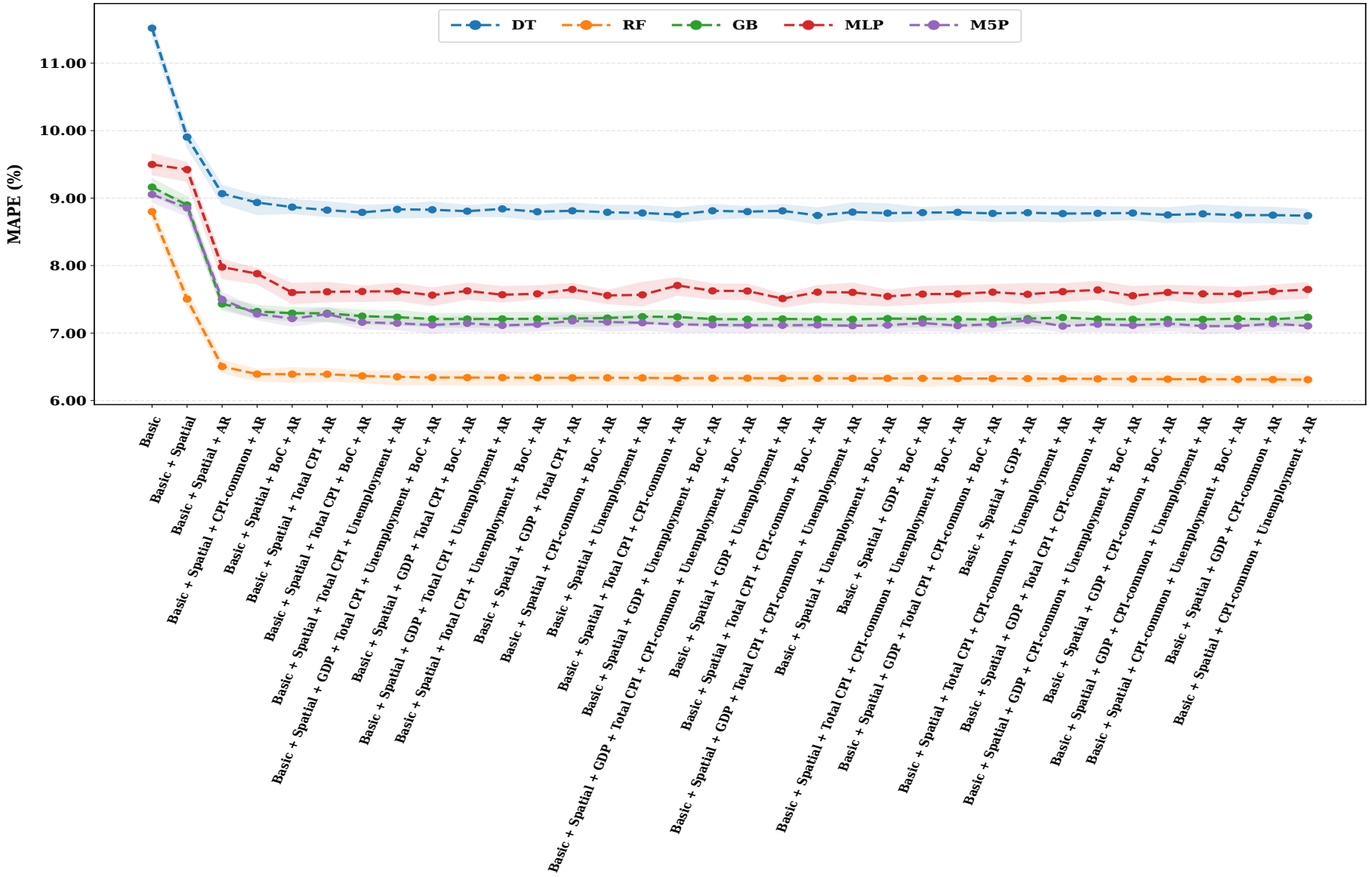

Figure 27. Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment 1 and Experiment 2 Baselines and All Experiment 4 Feature Configurations Using the Absorption Rate (AR) Local Market Indicator.

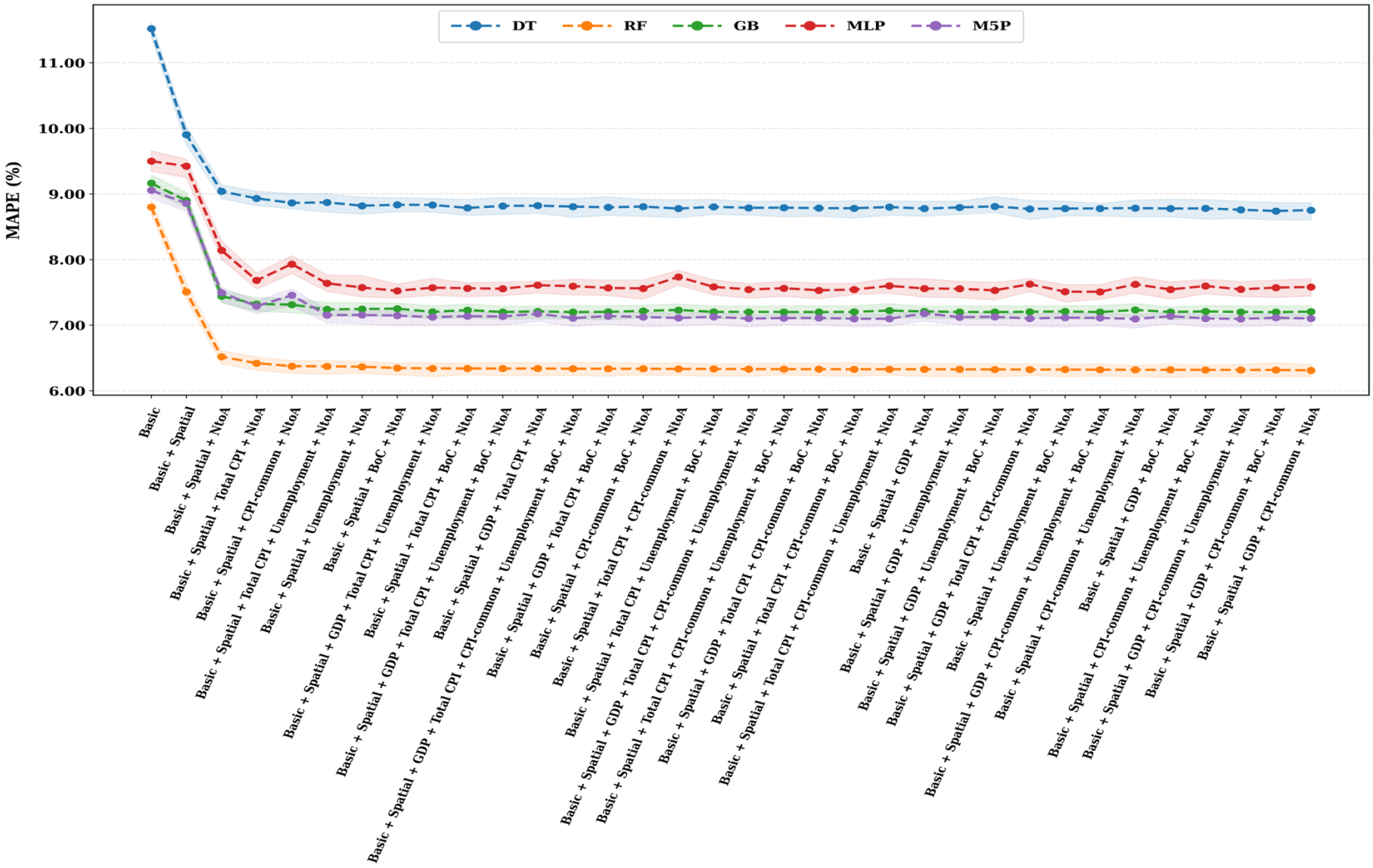

Figure 28. Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment 1 and Experiment 2 Baselines and All Experiment 4 Feature Configurations Using the New to Active (NtoA) Ratio Local Market Indicator.

Experiment 5 was designed to test whether models from experiments 1-4 can be used to predict prices of individual real estate transactions that occurred outside of the investigated period. Models were trained and saved using the entire transactional data spanning from January 1, 2023, to August 31, 2025. This experiment resulted in 1125 trained and saved models. For testing, the previously unused data on Toronto condominium transactional data from September 1 to December 31, 2025, were used. Exploration of the out of sample data revealed 640 condo transactions belonging to the 600-699 size range which were used for testing.

Using previously unseen 640 Toronto condo transactions, values for each were estimated using 1125 trained models, resulting in 720,000 values. Summary of these estimates is presented in Table 4, which reports the distribution of prediction results obtained using the more homogeneous dataset using APE buckets.

Test Results revealed that 43,194 out of 720,000 predictions correctly estimated or were within 1% of the actual sale price for 561 out of 640 transactions, while 515,113 out of 720,000 predictions missed the actual sale price by more than 5%. Summary of these findings is presented in Table 4, where prediction results are grouped into APE buckets. Each bucket represents a range of prediction errors between the predicted and actual sale prices. The table reports the number of unique transactions, the total number of predictions, the contribution of each machine learning algorithm, and the percentage of all unique transactions and predictions within each APE bucket.

Experiment 6 follows the workflow of Experiments 1-4, applied to training and testing datasets corresponding to only the properties in the size range 600-699. Including transaction data from January 1, 2023, to September 1, 2025, after removing outliers using IQR and isolating only transactions for properties in the 600-699 size range, yielded a dataset of 5994 transactions. A total of 1125 models were trained and tested using the same cross-validation approach as in experiments 1-4. To visualize the results and support the analysis, Figures 29-33 are produced for Experiment 6 to show the impact of macroeconomic features across five evaluated metrics, and Figures 34-39 for the impact of features representing the local market using MAPE (%). The results revealed that when a model is trained and tested on data exhibiting lower variability, evaluation errors are reduced. This approach allowed ML algorithms to identify a more consistent relationship between transaction characteristics. The complete mean performance results for Experiment 6 are provided in Appendix C.

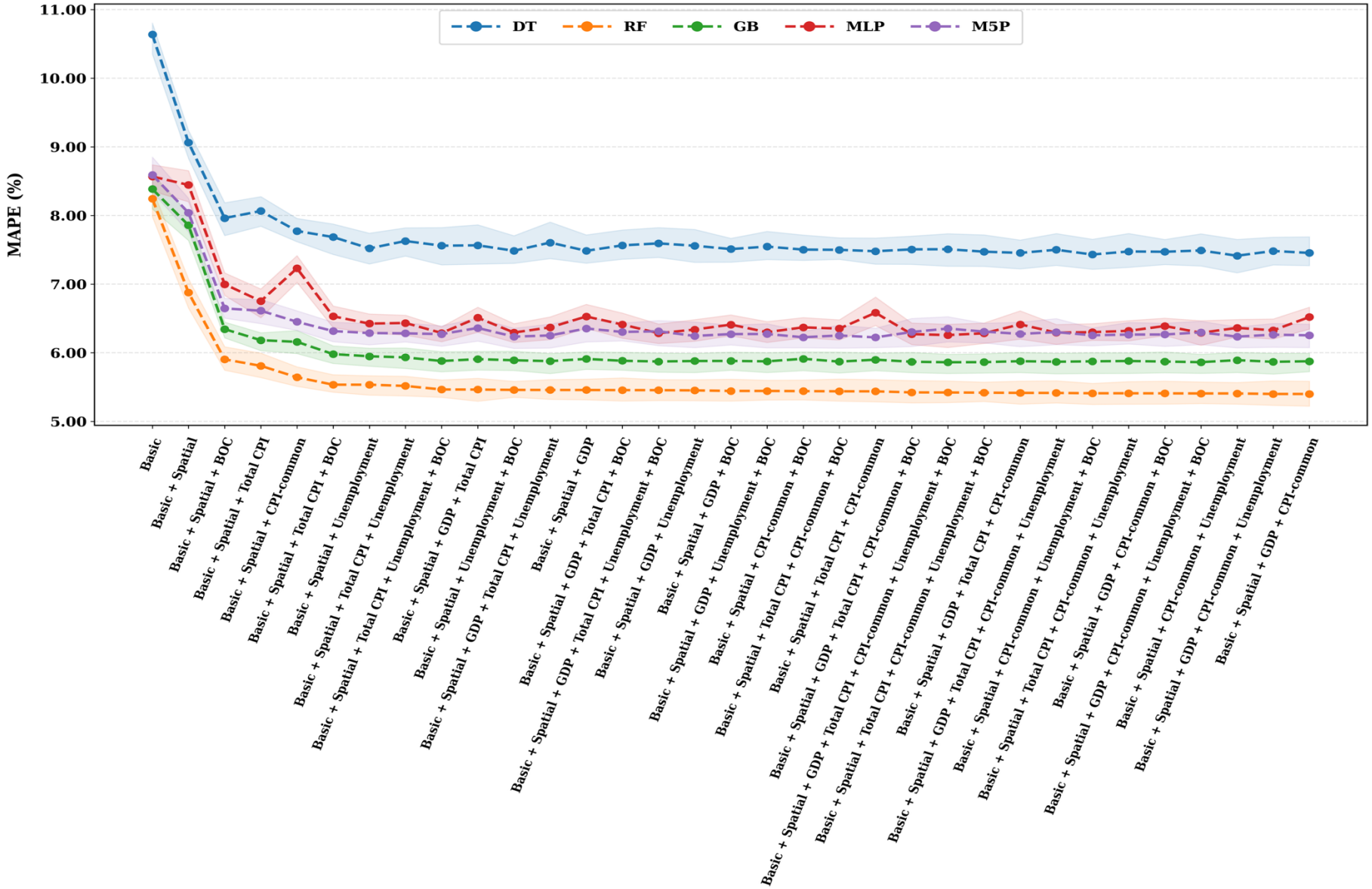

Figure 29. MAPE (%) with Q1–Q3 Ranges Across Models Using Different Macroeconomic Feature Combinations (Experiment 6).

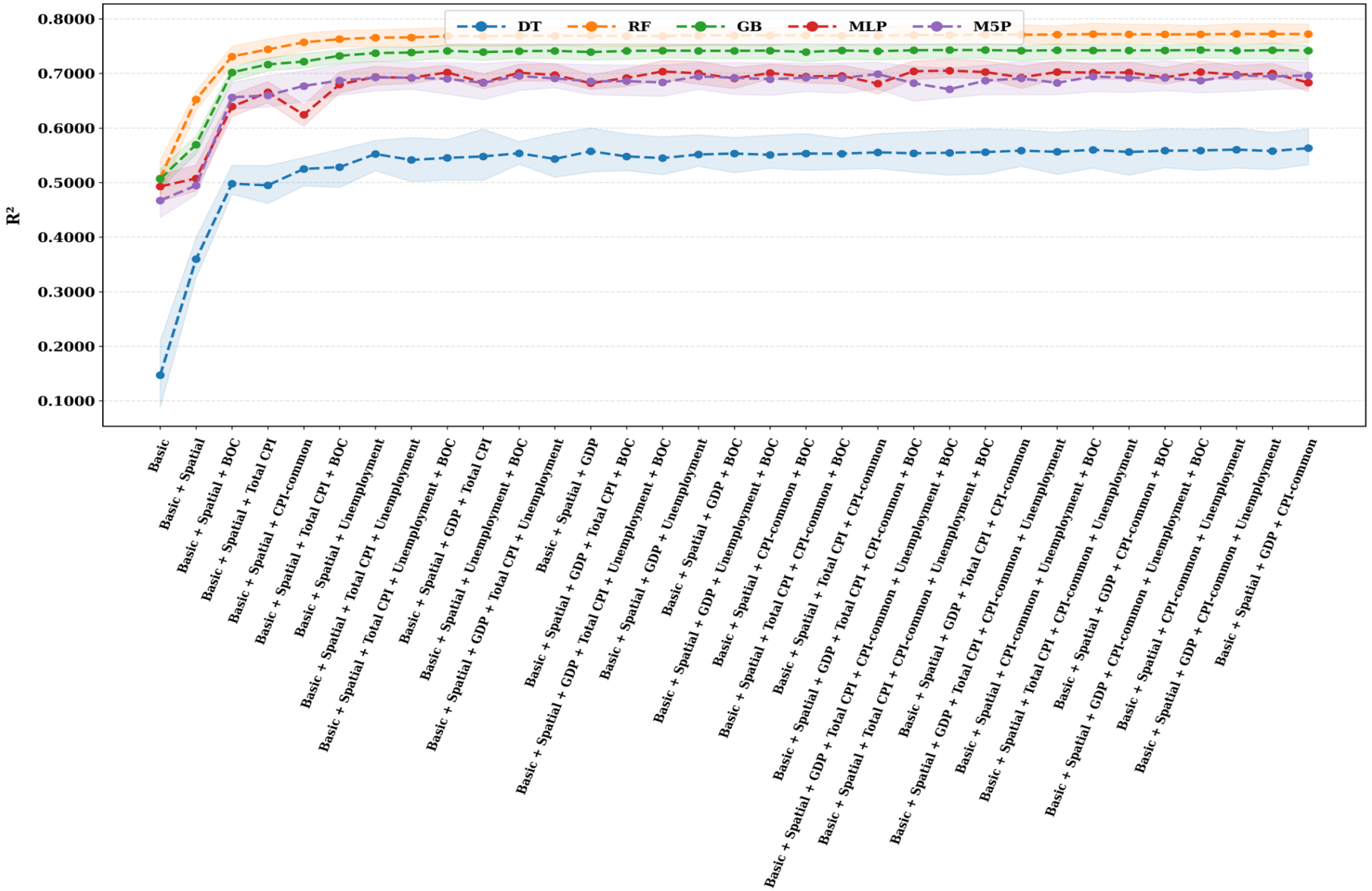

Figure 30. Mean R^2 with Q1–Q3 Ranges Across Models Using Different Macroeconomic Feature Combinations (Experiment 6).

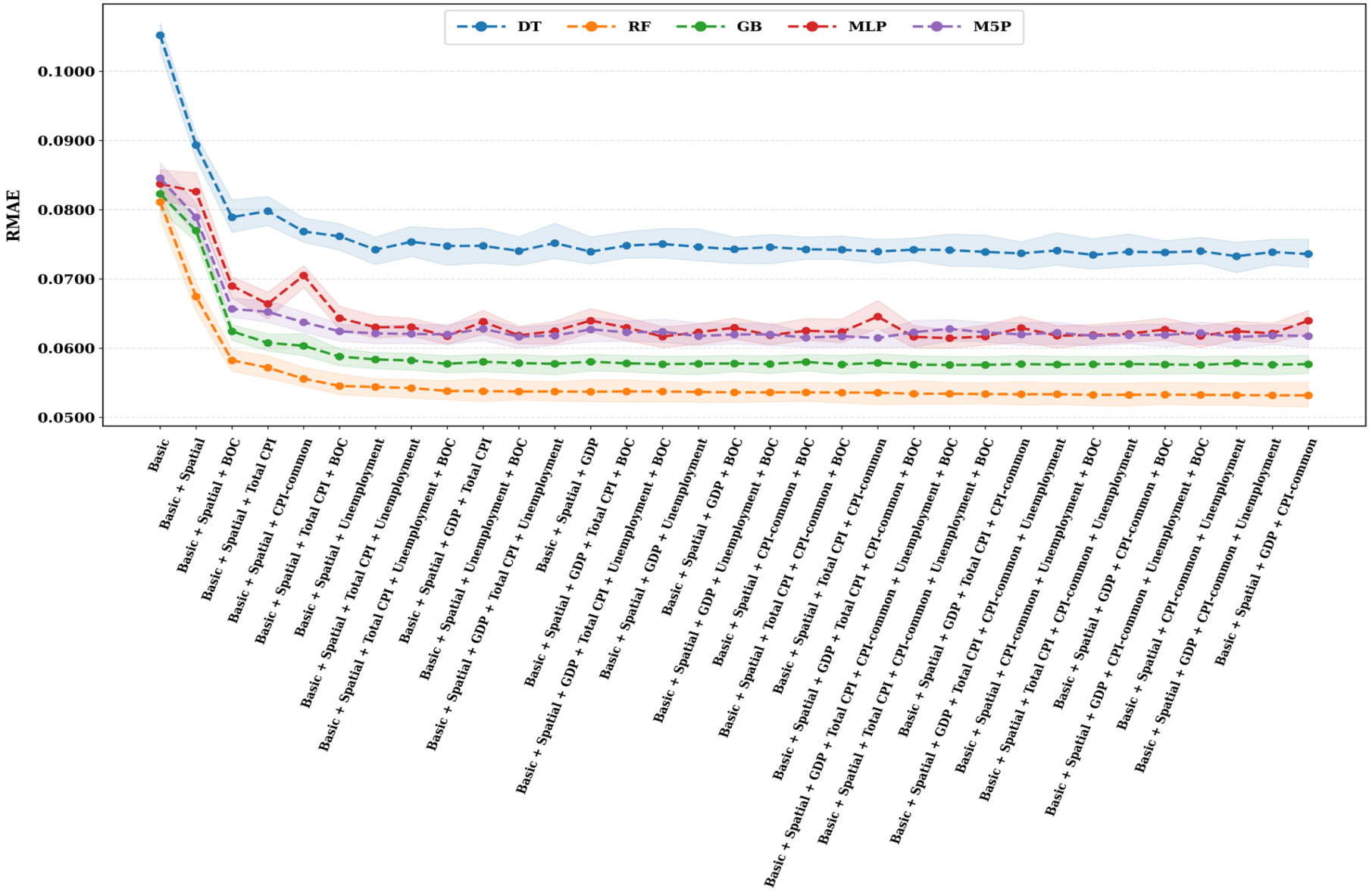

Figure 31. Mean RMAE with Q1–Q3 Ranges Across Models Using Different Macroeconomic Feature Combinations (Experiment 6).

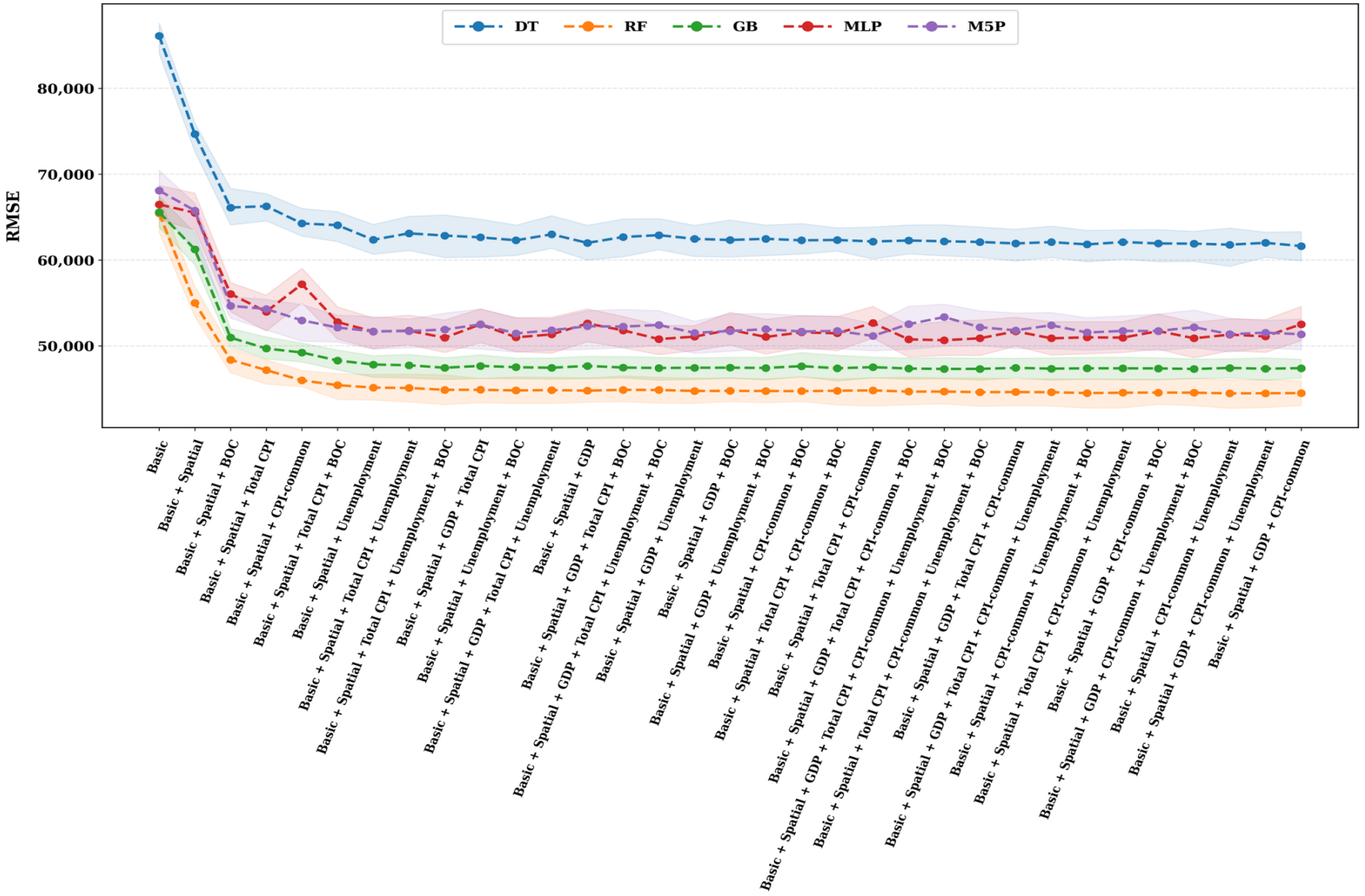

Figure 32. Mean RMSE with Q1–Q3 Ranges Across Models Using Different Macroeconomic Feature Combinations (Experiment 6).

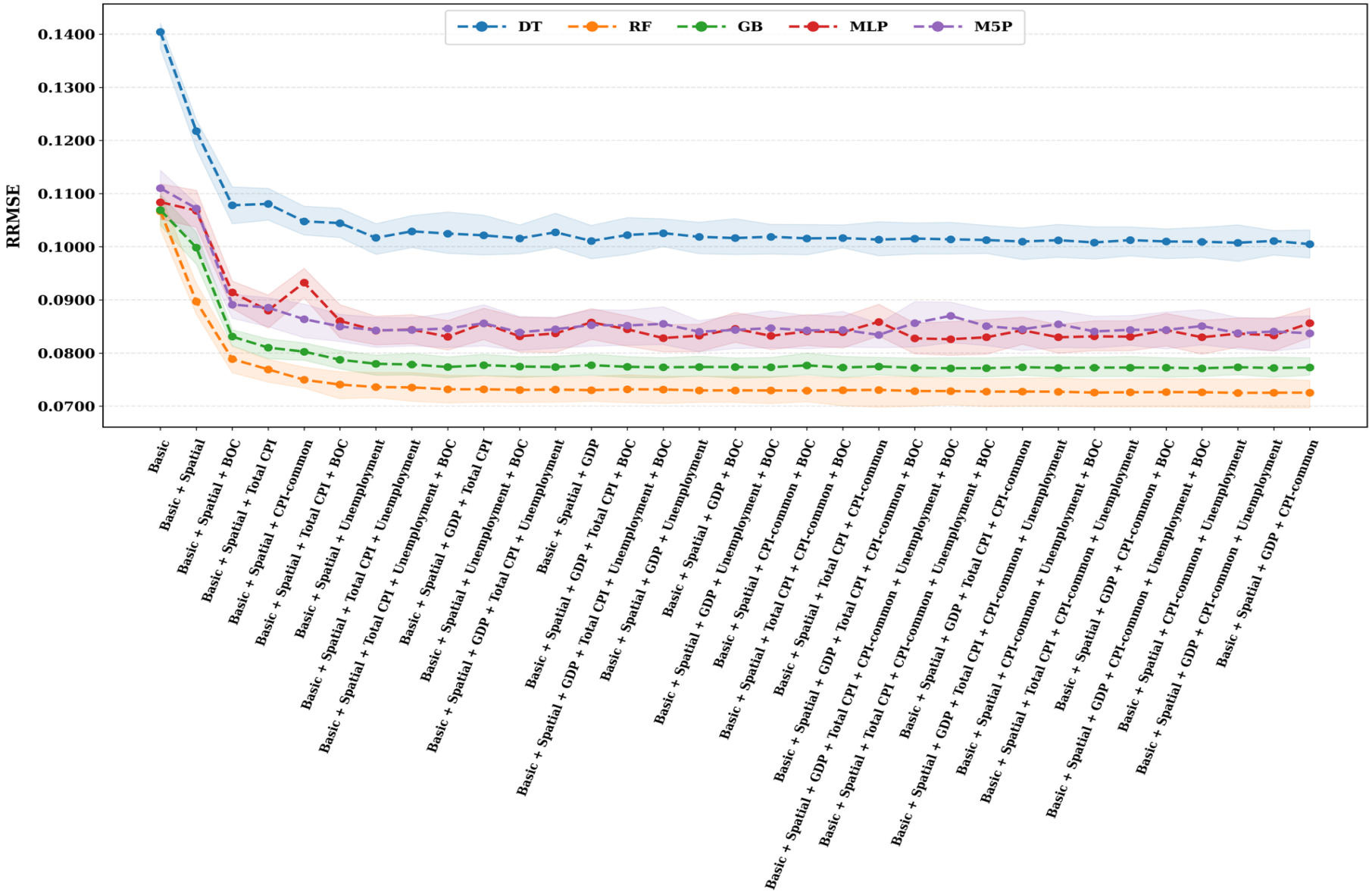

Figure 33. Mean RRMSE with Q1–Q3 Ranges Across Models Using Different Macroeconomic Feature Combinations (Experiment 6).

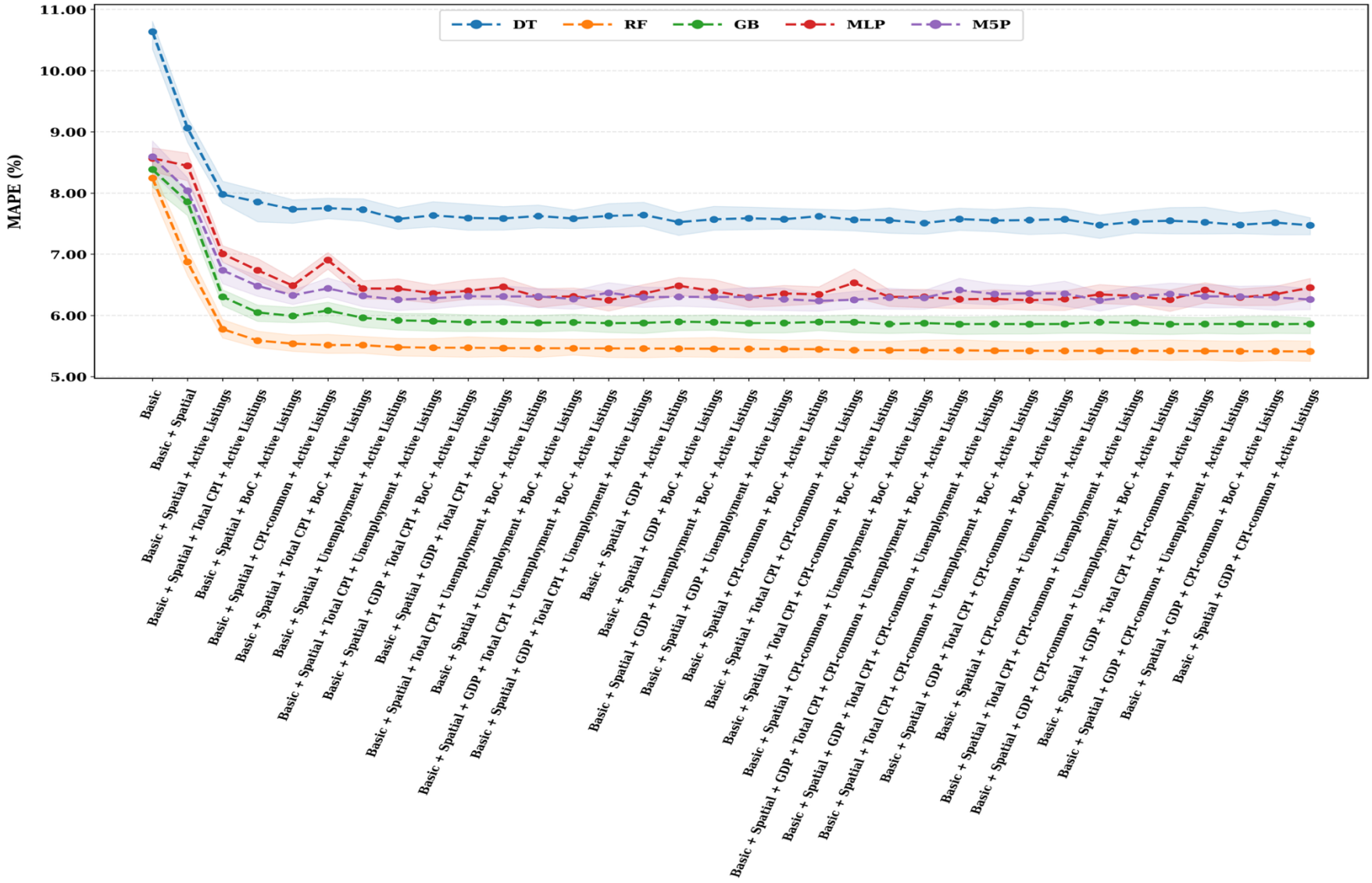

Figure 34. MAPE(%) Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment Feature Configurations Using the Active Listings Local Market Indicator.

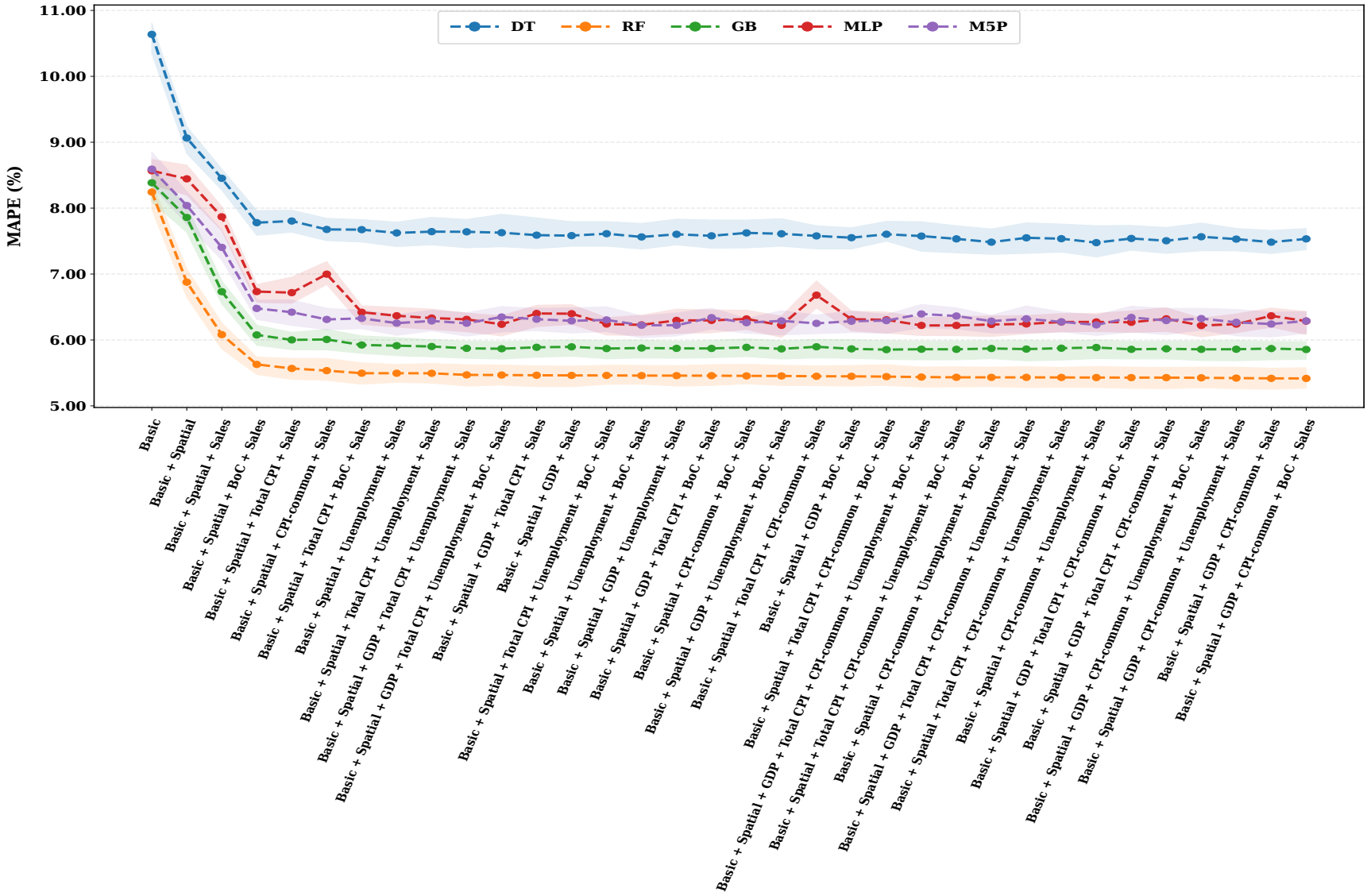

Figure 35. MAPE(%) Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment Feature Configurations Using the Sales Local Market Indicator.

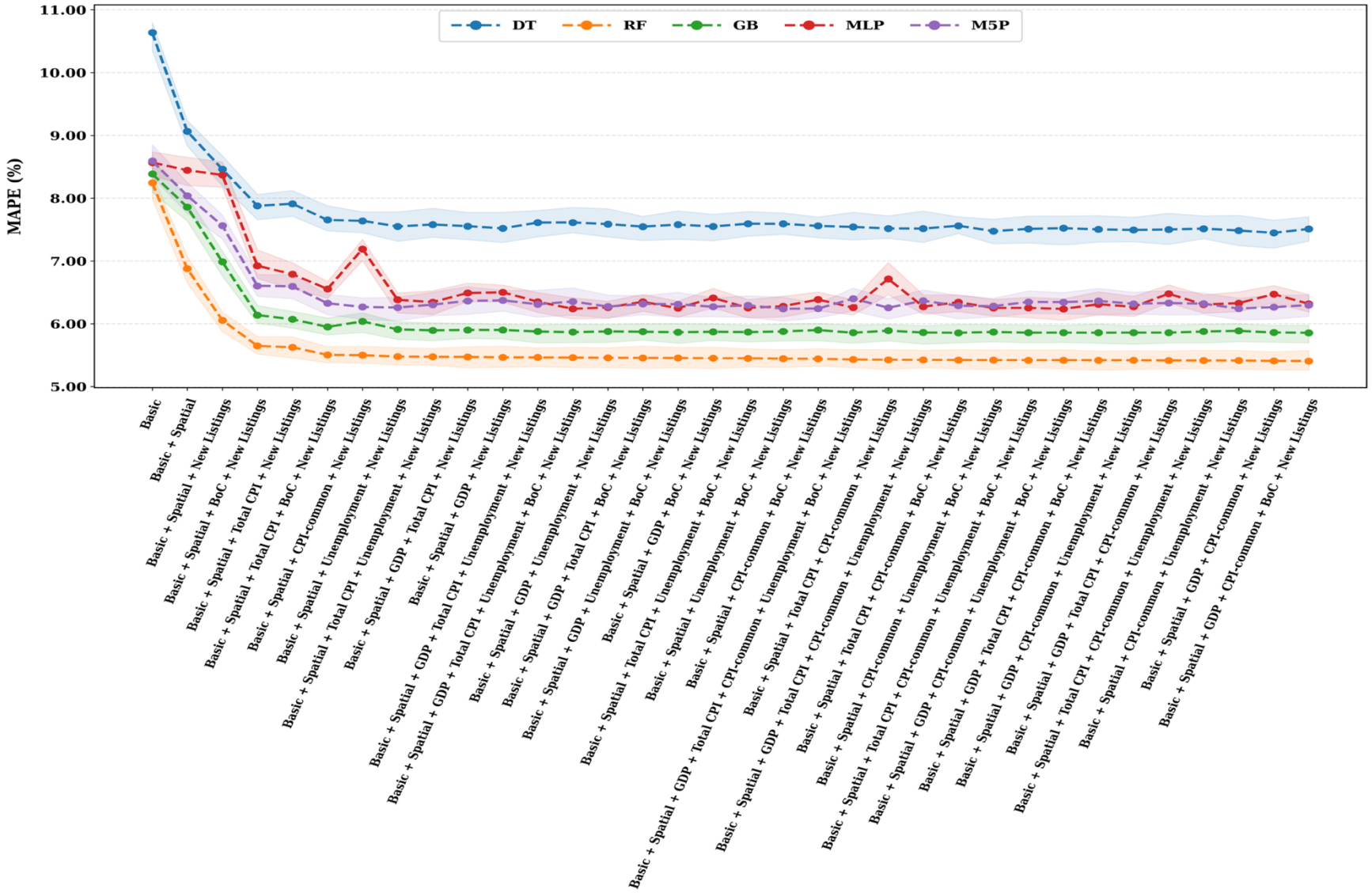

Figure 36. MAPE(%) Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment Feature Configurations Using the New Listings Local Market Indicator.

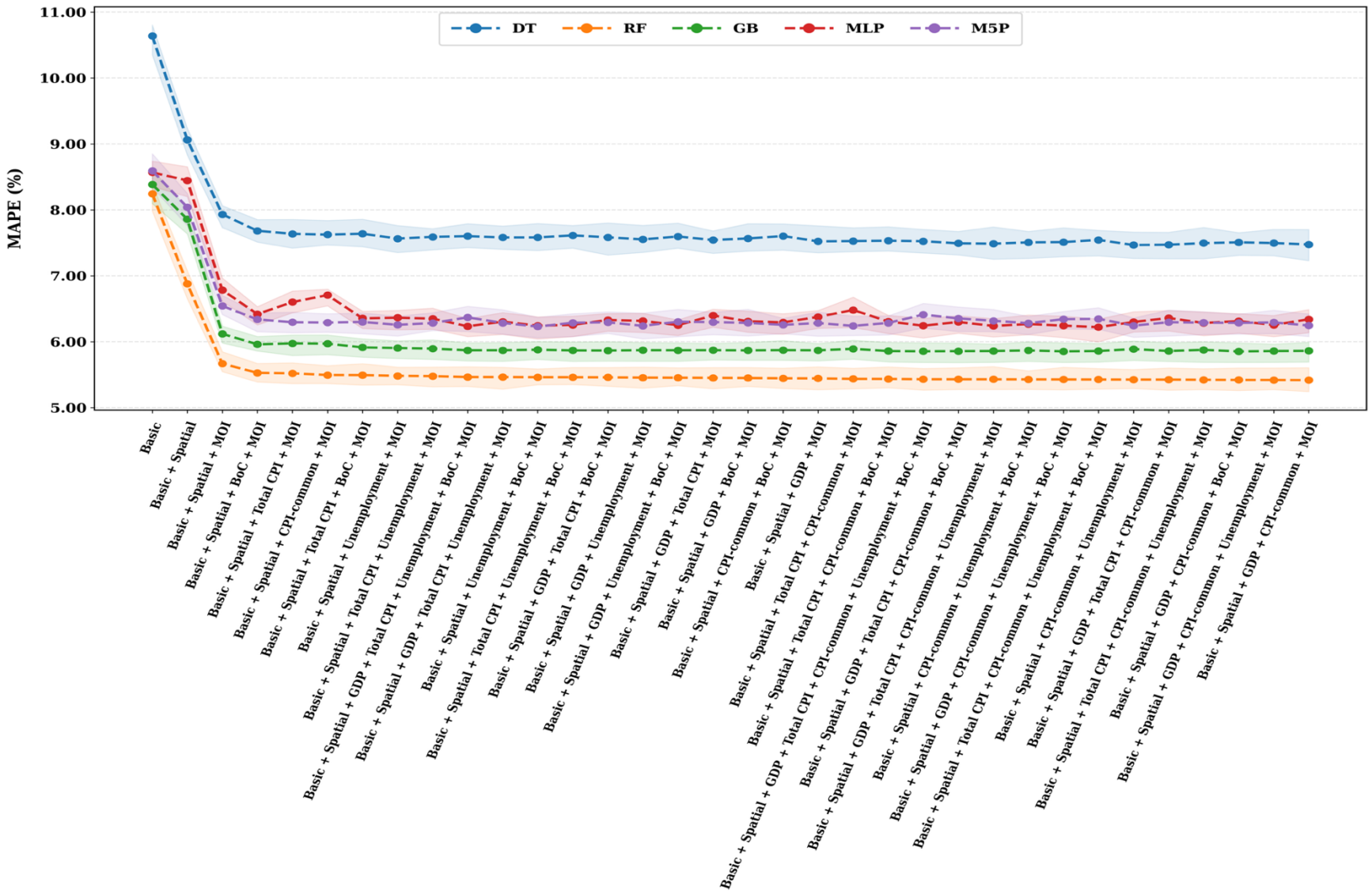

Figure 37. MAPE(%) Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment Feature Configurations Using Months of Inventory (MOI) Local Market Indicator.

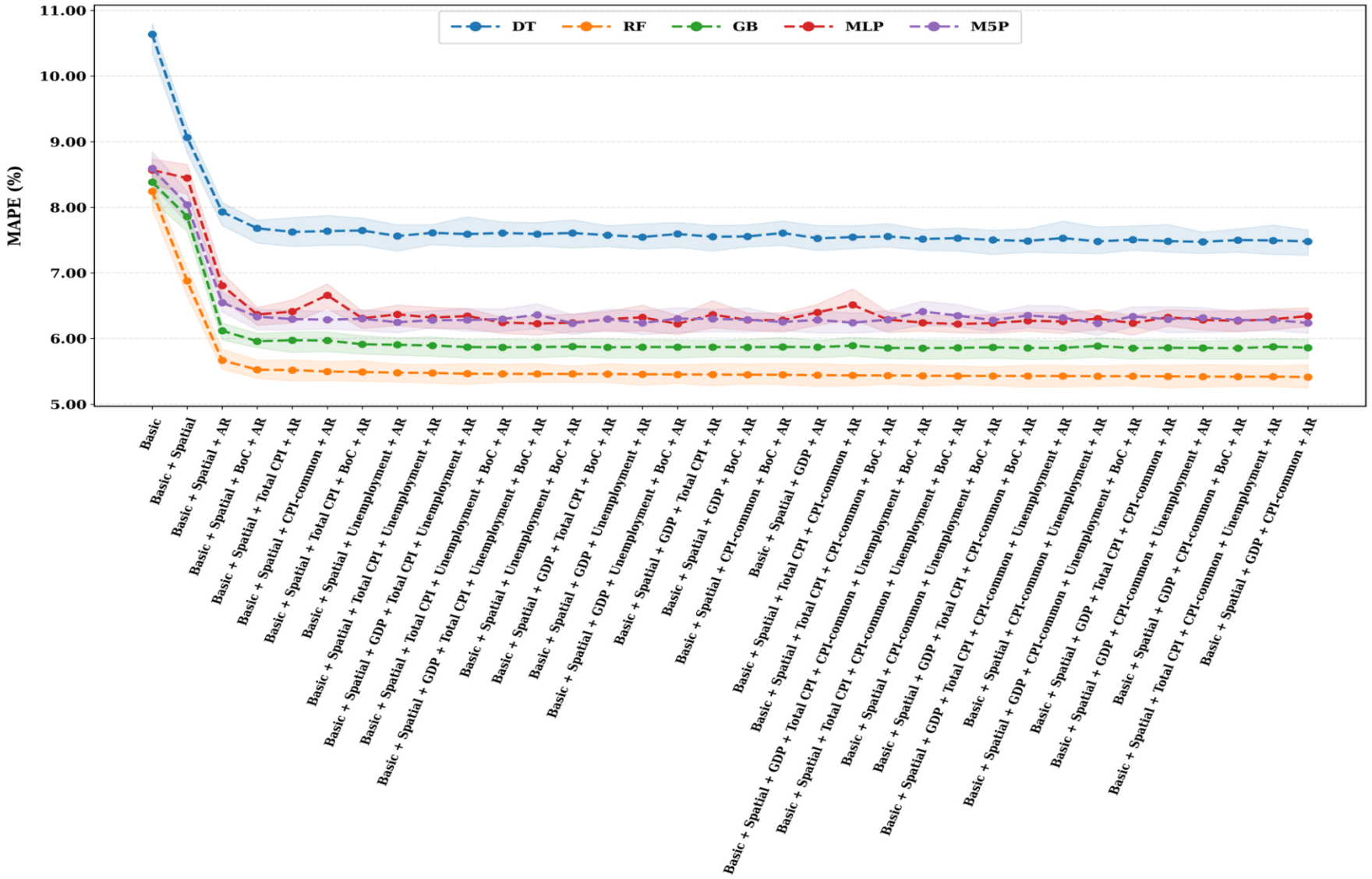

Figure 38. MAPE(%) Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment Feature Configurations Using the Absorption Rate (AR) Local Market Indicator.

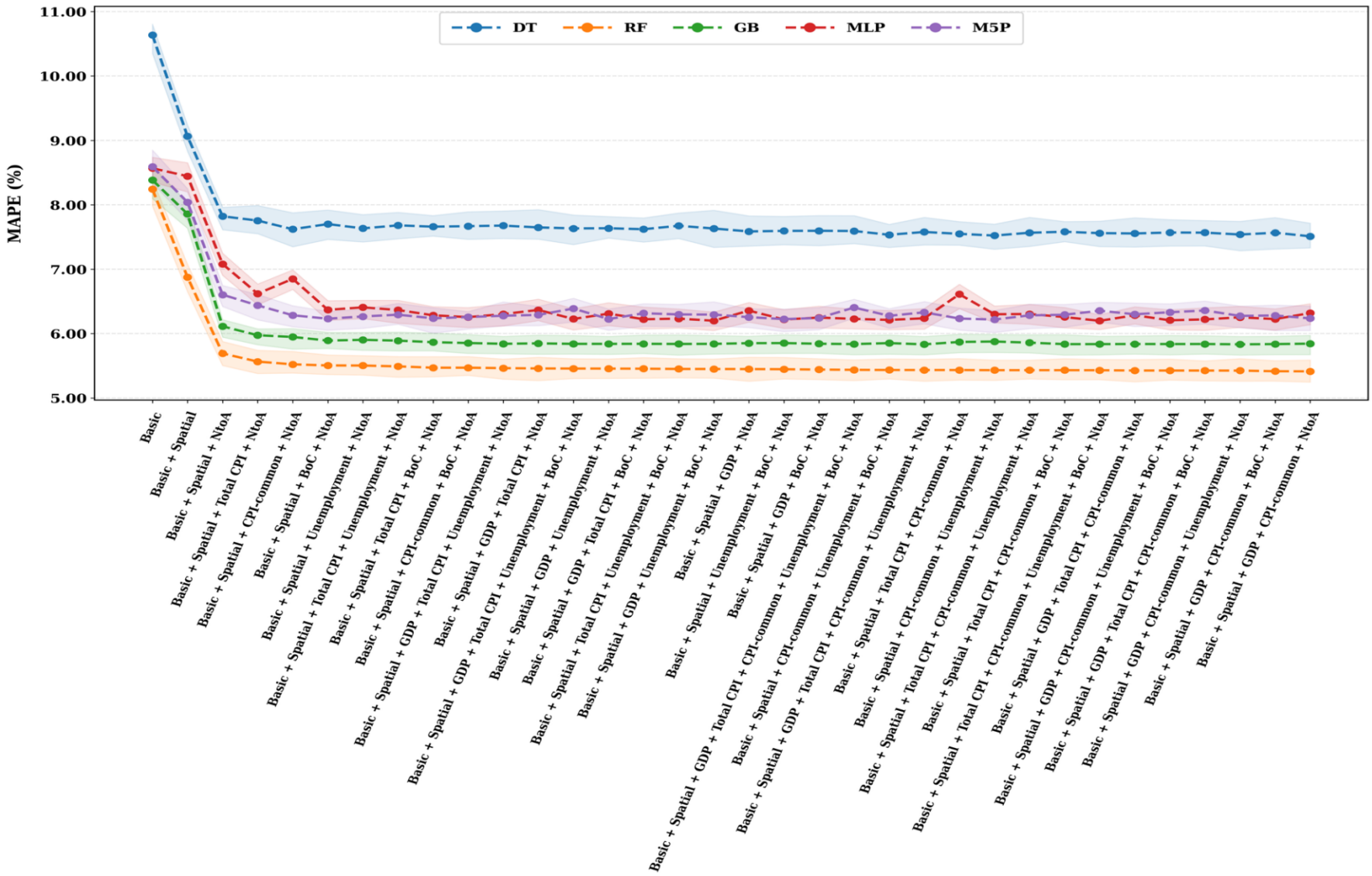

Figure 39. MAPE(%) Model Performance and Interquartile Ranges (Q1–Q3) for the Experiment Feature Configurations Using the New to Active (NtoA) Local Market Indicator.

In experiment 7, experiment 5 was repeated on the datasets corresponding to only transactions for properties in the 600-699 size category. Models were trained on datasets describing transactions that occurred from January 1, 2025, to August 31, 2025, and values were predicted for out-of-sample transactions that occurred from September 1, 2025, to December 31, 2025.

Limiting the training and testing data to the selected category yielded 5994 records for training and 640 records for predicting. Following the established procedure, using DT, RF, GB, M5P, and MLP on 225 sub-datasets resulted in 1125 trained models. Predicting values for 640 transactions using 1125 models yielded 720,000 estimates. Summary of these estimates is presented in Table 5, which reports the distribution of prediction results obtained using the more homogeneous dataset using APE buckets as was done in Experiment 5. The table reports the number of unique transactions, the total number of prediction results, the contribution of each machine learning algorithm, and the percentage of all unique transactions and prediction results within each APE bucket. Examined results revealed that 42,524 out of 720,000 estimates were within 1% of the actual sale price for 611 out of 640 transactions, while 516,963 out of 720,000 estimates missed the actual sale price by more than 5%.

Table 4
Distribution of Unique Transactions and Model Predictions by Absolute Percentage Error (APE) Range for Experiment 5

APE Bucket (%)	Unique MLS Transactions	Total Predictions	DT	RF	GB	MLP	M5P	% of Unique MLS Transactions	% of All Predictions
0<=APE<1	561	43194	7931	10034	7890	8319	9020	87.66	6.00
1<=APE<2	36	41932	7279	9651	7366	8303	9333	5.62	5.82
2<=APE<3	8	41104	7903	8876	7291	8073	8961	1.25	5.71
3<=APE<4	10	40489	8145	8602	7033	7791	8918	1.56	5.62
4<=APE<5	4	38168	7125	8176	7067	7598	8202	0.62	5.30
APE>=5	21	515113	105617	98661	107353	103916	99566	3.28	71.54

Table 5
Distribution of Unique Transactions and Model Predictions by Absolute Percentage Error (APE) Range for experiment 7.

APE Bucket (%)	Unique MLS Transactions	Total Predictions	DT	RF	GB	MLP	M5P	% of Unique MLS Transactions	% of All Predictions
0<=APE<1%	611	42524	8410	10180	7118	8616	8200	95.47	5.91
1<=APE<2%	14	41168	7980	9772	7107	8324	7985	2.19	5.72
2<=APE<3%	6	40027	7581	9411	7176	8104	7755	0.94	5.56
3<=APE<4%	4	41107	9803	8708	6896	7748	7952	0.62	5.71
4<=APE<5%	1	38211	7201	8396	7476	7537	7601	0.16	5.31
APE>=5%	4	516963	103025	97533	108227	103671	104507	0.62	71.8

Chapter 5: Results and Analysis

The analysis of results from models investigated in this study shows that the models for individual real estate property price estimates are consistent with statistical and ML principles.

Results reported in the Appendix suggest that algorithms perform differently across datasets and that no algorithm outperforming others on all constructed datasets can be identified. This conclusion is consistent with the No Free Lunch theorem (Wolpert, 1996) and therefore suggests leveraging an ensemble approach to exploit the complementary strengths of individual models.

Table 6

MAPE (%) Performance of All Machine Learning Models Across Basic, Spatial, and Single External Feature Configurations (Experiments 1–4).

Feature Configuration	DT	GB	M5P	MLP	RF	Average MAPE (%)
Basic	11.5188	9.163	9.054	9.4987	8.7991	9.6067
Basic + Spatial	9.9044	8.8972	8.8554	9.4236	7.5049	8.9171
Basic + Spatial + New Listings	9.6615	8.294	8.7161	9.3392	6.9403	8.5902
Basic + Spatial + Sales	9.5449	7.9501	8.2405	8.8488	6.8594	8.2887
Basic + Spatial + Active Listings	9.2253	7.6121	7.7571	8.2214	6.6325	7.8897
Basic + Spatial + BoC Rate	8.9934	7.5941	7.5413	8.1185	6.6116	7.7718
Basic + Spatial + CPI-common	8.9492	7.4854	7.5137	8.3499	6.5128	7.7622
Basic + Spatial + NtoA	9.0384	7.4402	7.4925	8.1407	6.5177	7.7259
Basic + Spatial + Total CPI	9.0116	7.4595	7.4997	7.9873	6.5381	7.6992
Basic + Spatial + Absorption Rate	9.0663	7.4318	7.4973	7.9781	6.5047	7.6956
Basic + Spatial + MOI	9.0564	7.4318	7.4804	7.9965	6.5054	7.6941
Basic + Spatial + GDP	8.7076	7.2466	7.2959	7.8397	6.3201	7.482
Basic + Spatial + Unemployment	8.7271	7.2781	7.216	7.7212	6.3606	7.4606

Additionally, the reported results suggest that model performance depends on both the choice of ML algorithm and the selection of dataset features. In this study, Experiments 1-4

investigated how model performance changed as additional external variables were introduced into the models.

Table 7

MAPE (%) Performance of All Models Across Basic, Spatial, and Single External Feature Configurations for the Most Common Property Size Segment (Experiment 6).

Feature Configuration	DT	GB	M5P	MLP	RF	Average MAPE (%)
Basic	10.6362	8.3849	8.5919	8.5672	8.2437	8.8848
Basic + Spatial	9.0635	7.8578	8.0395	8.4448	6.8770	8.0565
Basic + Spatial + New Listings	8.4600	6.9856	7.5633	8.3692	6.0560	7.4868
Basic + Spatial + Sales	8.4525	6.7332	7.4047	7.8680	6.0810	7.3079
Basic + Spatial + Active Listings	7.9773	6.3055	6.7368	7.0066	5.7757	6.7604
Basic + Spatial + BoC Rate	7.9616	6.3430	6.6450	6.9975	5.9027	6.7700
Basic + Spatial + CPI-common	7.7733	6.1580	6.4499	7.2293	5.6416	6.6504
Basic + Spatial + NtoA	7.8210	6.1125	6.6037	7.0800	5.6916	6.6618
Basic + Spatial + Total CPI	8.0644	6.1821	6.6117	6.7517	5.8084	6.6837
Basic + Spatial + Absorption Rate	7.9292	6.1189	6.5476	6.8073	5.6691	6.6144
Basic + Spatial + MOI	7.9311	6.1189	6.5416	6.7832	5.6668	6.6083
Basic + Spatial + GDP	7.4848	5.9087	6.3524	6.5275	5.4561	6.3459
Basic + Spatial + Unemployment	7.5200	5.9475	6.2861	6.4239	5.5334	6.3422

While adding geographic coordinates as spatial information to sets of features improved results across all investigative models, adding other external features produced less consistent results. Results show that increasing model and dataset complexity does not necessarily guarantee improved performance, and that similar results can be achieved with just a few external features. For example, it was observed that, due to the high correlation among macroeconomic features, models using only one macroeconomic factor produce results within a comparable range to those using more complex combinations of the same features. Additionally, it was noted that local market conditions indicators and features engineered from them can be used interchangeably with

macroeconomic factors when the latter are unavailable, although this substitution entails some loss of accuracy.

Table 8

MAPE (%) Performance of All Models Across Basic, Spatial, and Single External Feature Configurations for the Most Common Property Size Segment (Experiment 5).

Feature Configuration	DT	GB	M5P	MLP	RF	MAPE (%)
Basic	22.1863	21.0098	21.1657	22.7009	20.9302	21.5986
Basic + Spatial + New Listings	21.308	21.1346	20.188	22.3417	21.1838	21.2312
Basic + Spatial	18.3366	20.6097	20.417	21.9881	17.7243	19.8152
Basic + Spatial + Sales	18.6799	18.425	18.9444	19.2751	18.4019	18.7453
Basic + Spatial + Active Listings	18.6827	18.0997	16.7555	18.8078	17.3501	17.9391
Basic + Spatial + MOI	17.9129	16.68	16.7675	17.109	16.9145	17.0768
Basic + Spatial + AR	18.1477	16.6851	16.4833	16.7035	16.8747	16.9789
Basic + Spatial + CPI-common	16.7731	16.5933	16.1577	18.914	15.6177	16.8111
Basic + Spatial + Total CPI	17.479	15.0255	15.2073	18.3098	15.3098	16.2663
Basic + Spatial + NtoA	16.1573	14.0111	15.3876	15.3925	14.0004	14.9898
Basic + Spatial + Unemployment	15.7781	13.8265	13.6846	13.1211	14.0186	14.0858
Basic + Spatial + GDP	14.5021	12.8944	12.6428	13.4911	12.7523	13.2565
Basic + Spatial + BoC Rate	12.7783	10.7616	9.9378	9.2521	10.1163	10.5692

While the GDP number reported by Statistics Canada remains an important factor in assessing the performance of the Canadian economy, Figure 11 shows that some correlation exists between local market indicators and macroeconomic factors, as the overall performance of the Canadian economy is reflected in local real estate market conditions. This observation can be particularly useful when evaluating real estate property values using unseen data from periods before Stats Canada had the opportunity to report macroeconomic factors. In experiments 4 and 6, using cross-validation for model evaluation, it was observed that using engineered features such as MOI and AR can yield results similar to those of models incorporating macroeconomic features, as can be seen in Table 6 and 7. This finding is also confirmed by experiments 5 and 7, which used

previously unseen segments of data from the last three months of 2025 for testing and predicting individual transaction values, see Tables 8 and 9.

Table 9

MAPE (%) Performance of All Models Across Basic, Spatial, and Single External Feature Configurations for the Most Common Property Size Segment (Experiment 7).

Feature Configuration	DT	GB	M5P	MLP	RF	MAPE (%)
Basic	21.135	19.6234	21.6896	20.3068	19.3965	20.4302
Basic + Spatial + New Listings	21.0302	19.6579	21.4584	20.426	19.6813	20.4507
Basic + Spatial	17.3133	18.8406	18.3743	20.3239	16.5595	18.2823
Basic + Spatial + Sales	19.4351	17.7429	17.3732	18.1343	17.3334	18.0038
Basic + Spatial + Active Listings	18.1404	16.861	16.7983	17.4456	16.3863	17.1263
Basic + Spatial + CPI-common	17.1503	15.9023	15.6995	15.8466	15.8766	16.0951
Basic + Spatial + MOI	16.6756	15.9023	15.8323	16.1275	15.8391	16.0753
Basic + Spatial + AR	16.3304	15.5406	15.854	16.6751	14.9624	15.8725
Basic + Spatial + Total CPI	15.9022	15.306	15.6641	17.2502	14.8053	15.7856
Basic + Spatial + NtoA	15.5246	14.103	13.4063	15.3179	13.3107	14.3325
Basic + Spatial + Unemployment	14.8037	13.5242	13.8196	12.6047	13.0969	13.5698
Basic + Spatial + GDP	13.7063	12.9663	13.0791	12.7534	12.2317	12.9474
Basic + Spatial + BoC Rate	12.3526	10.4284	9.7585	8.7043	9.7655	10.2019

To facilitate comparison of the results for Experiments 1-4, 5, 6, and 7, predictive performance was expressed using the common evaluation metric MAPE (%). As one of the most widely used measures of forecast accuracy, MAPE (%) is scale-independent, easily interpretable, and allows comparison across different machine learning models, feature configurations, and evaluation methodologies (Kim & Kim, 2016). Using the APE (%) values calculated for the 720,000 predictions generated in Experiment 5 and the 720,000 predictions generated in Experiment 7, the mean MAPE (%) was computed for each dataset and machine learning model. The complete MAPE(%) results for Experiments 5 and 7 are presented in Appendix D. Summaries of the mean MAPE (%) results for Experiments 5 and 7, including the Basic and Basic + Spatial baseline configurations as well as configurations incorporating a single external feature, are presented in

Tables 8 and 9. The purpose of comparing Experiment 6 with Experiment 7 is to determine whether the predictive improvements achieved by adding a single external feature during cross-validation are maintained when the models are evaluated on previously unseen condominium transactions.

As can be observed from Figures 40-49, the mean MAPE% values for the basic and basic spatial models in Experiments 5 and 7 are nearly double those in Experiments 1-4 and 6. This can be attributed to a significant shift in the Toronto real estate market that occurred during the last quarter of 2025, a period used for out-of-sample testing. As noted in the Bank of Canada article by Straus and Rao (2026), this period saw weaker market conditions. Additionally, plotting the temporal trends in average sale prices and the Bank of Canada overnight lending rate, as presented in Figures 40 and 41, illustrates differences between training and testing sets. Nevertheless, feature importance largely follows the same trends as in Experiments 1-4 and 6, with the baseline model yielding higher error than the spatial model. While the current approach can still be used and additional error reduction is achieved by introducing external features see Figures 40-49, this observation calls for model retraining as new information about factors affecting the market and its conditions becomes available.

Additionally, as shown in Figures 40, 42, 44, 46, and 48, using a more homogeneous dataset in Experiment 6 to replicate Experiments 1-4 yields lower mean MAPE% values, but the pattern established in Experiments 1-4 across different datasets remains mostly unchanged for Experiment 6 as well. This signals that while data composition is important for the model's performance, the relative performance of the evaluated feature configurations remains consistent in most cases. Moreover, as shown in Figures 41, 43, 45, 47, and 49, when comparing MAPE% from Experiments 5 and 7, we observe a pattern similar to that we saw when comparing Experiments 1- 4 and 6, suggesting that the importance of features remains largely consistent.

Comparisons across experiments showed that although MAPE (%) values varied due to differences in testing conditions and dataset heterogeneity, the relative ranking of the investigated feature configurations remained largely consistent across all experiment.

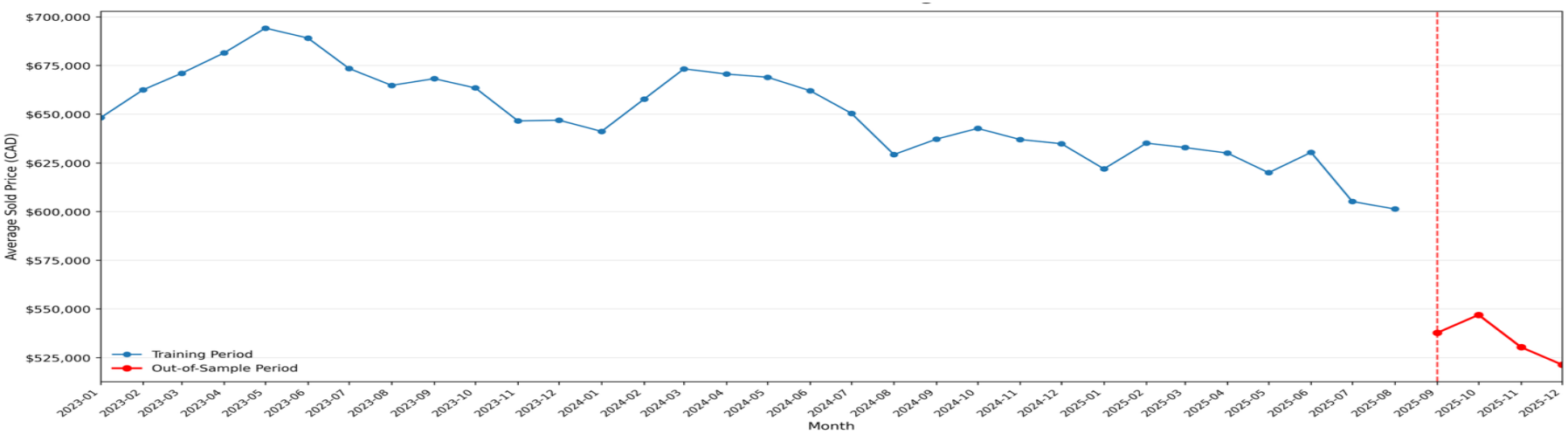

Figure 40. Temporal Trend in Toronto Condominium Average Sold Price: Training and Out-of-Sample Periods in experiment 5 and7.

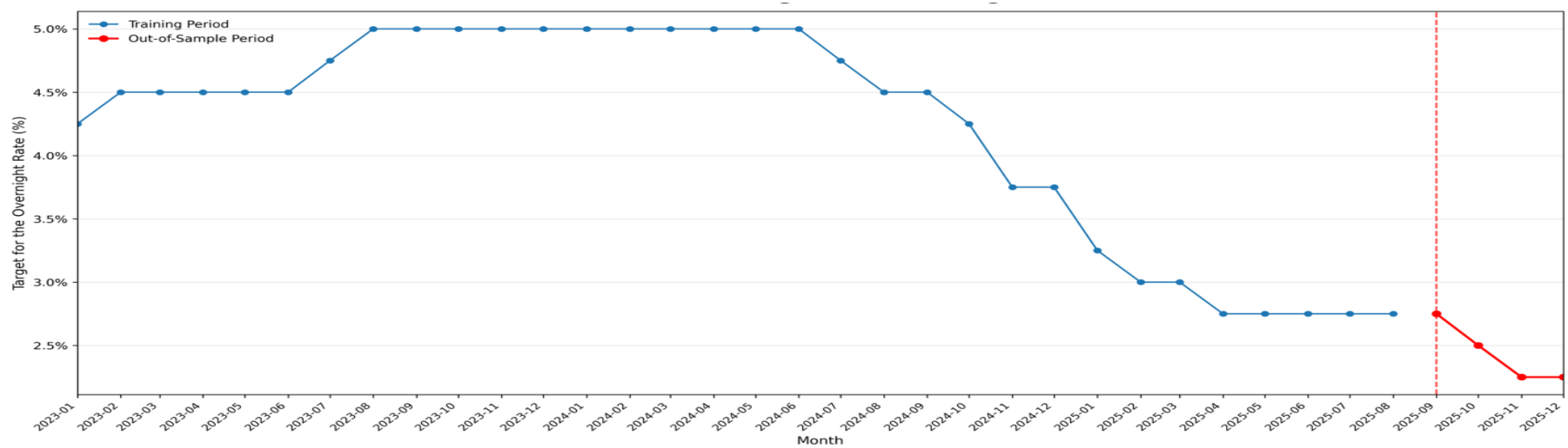

Figure 41. Temporal Trend in the Bank of Canada Target for the Overnight Rate: Training and Out-of-Sample Periods in experiment 5 and 7.

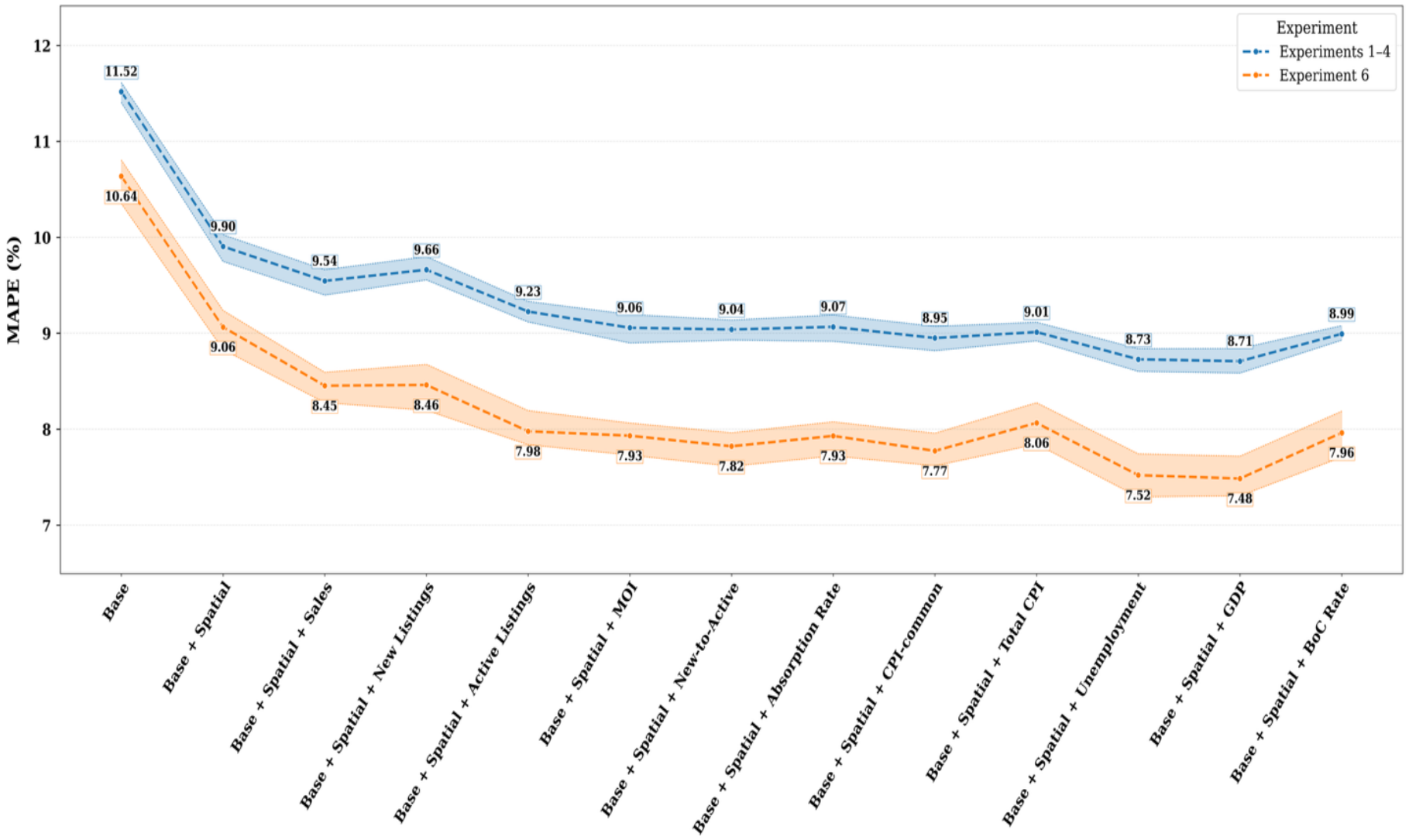

Figure 42. Decision Tree (DT) Model MAPE (%) Across Single External Feature Configurations in Experiments 1–4 and 6.

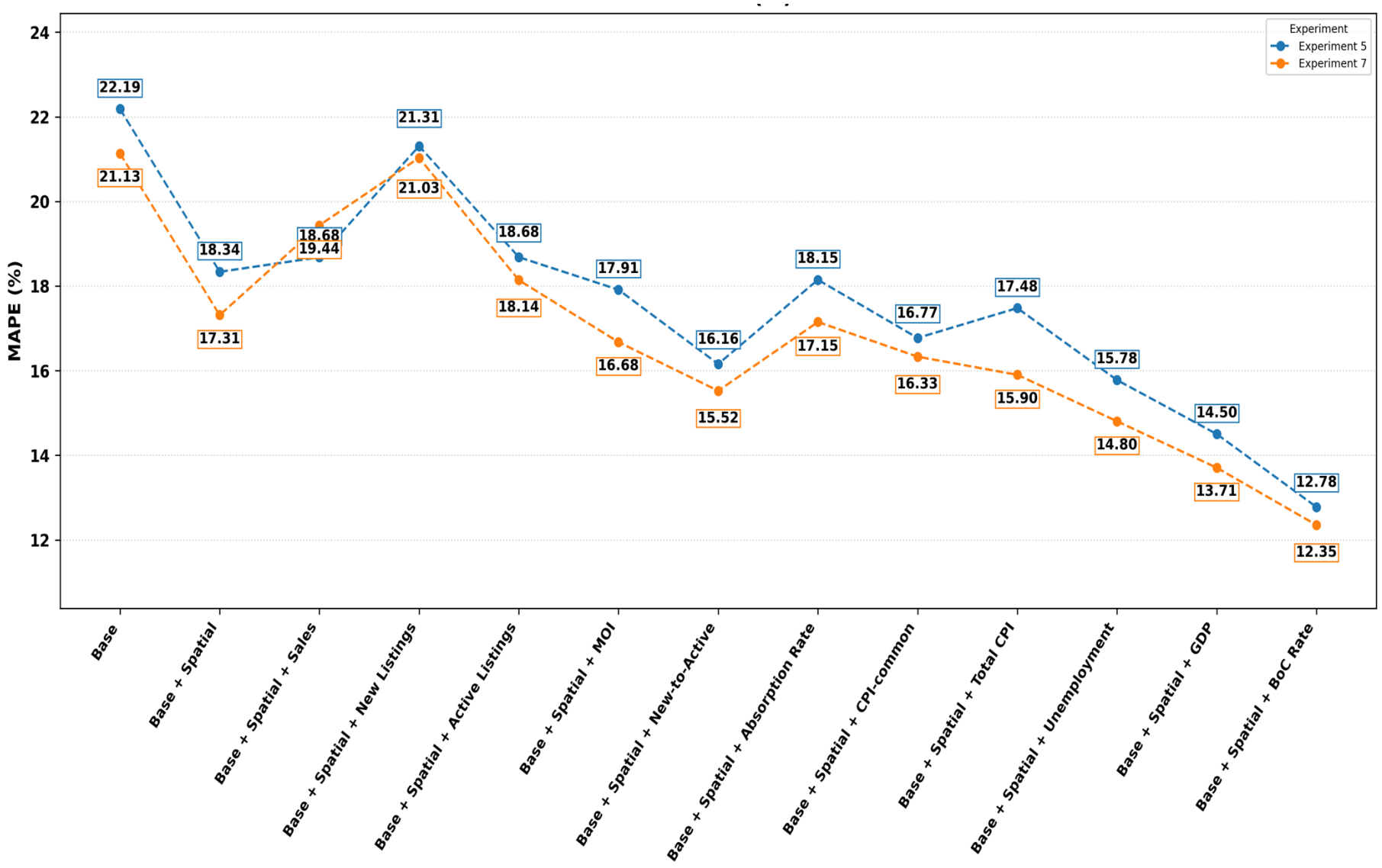

Figure 43. Decision Tree (DT) Model MAPE (%) Across Single External Feature Configurations in Experiments 5 and 7.

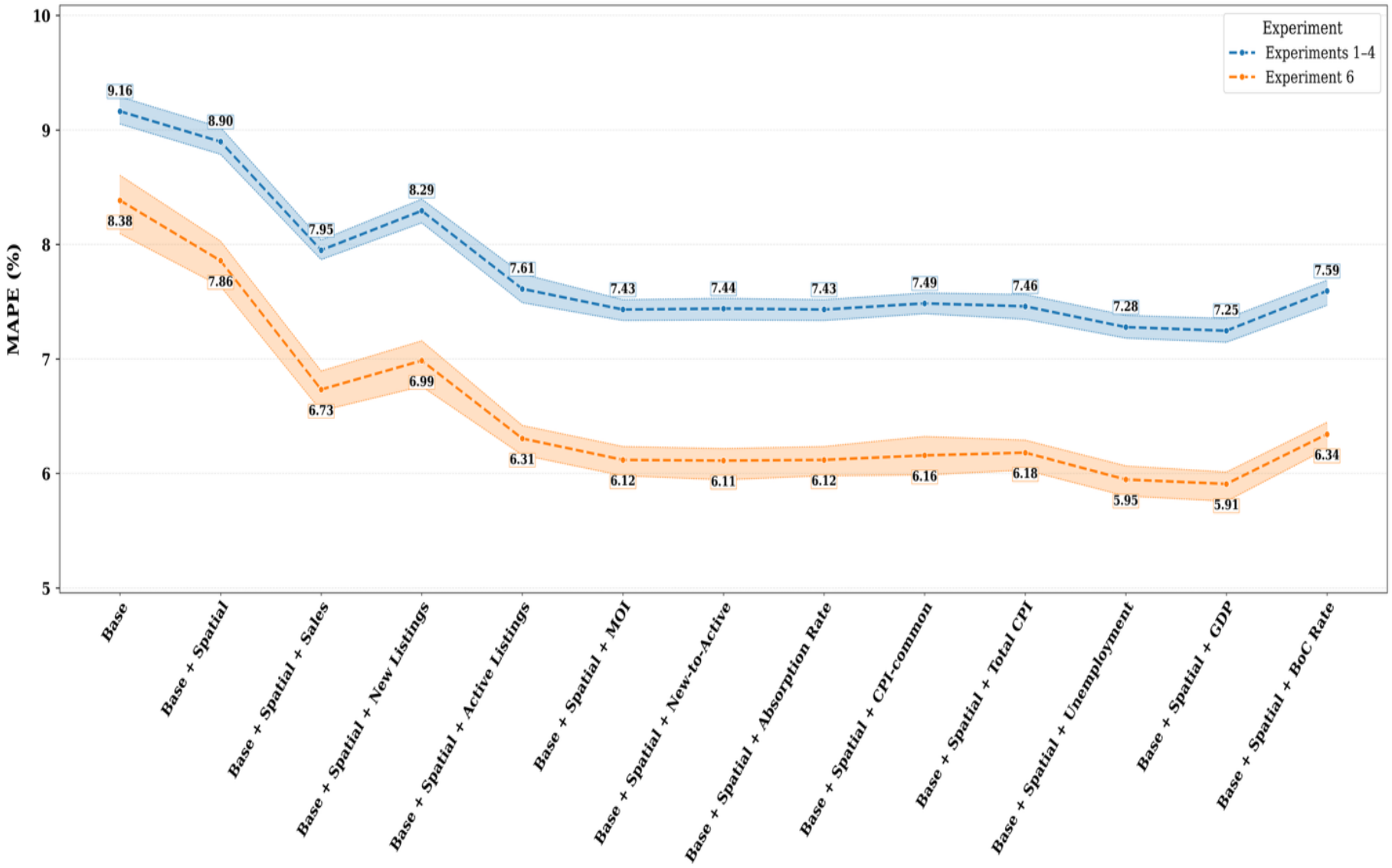

Figure 44. Gradient Boosting (GB) Model MAPE (%) Across Single External Feature Configurations in Experiments 1–4 and 6.

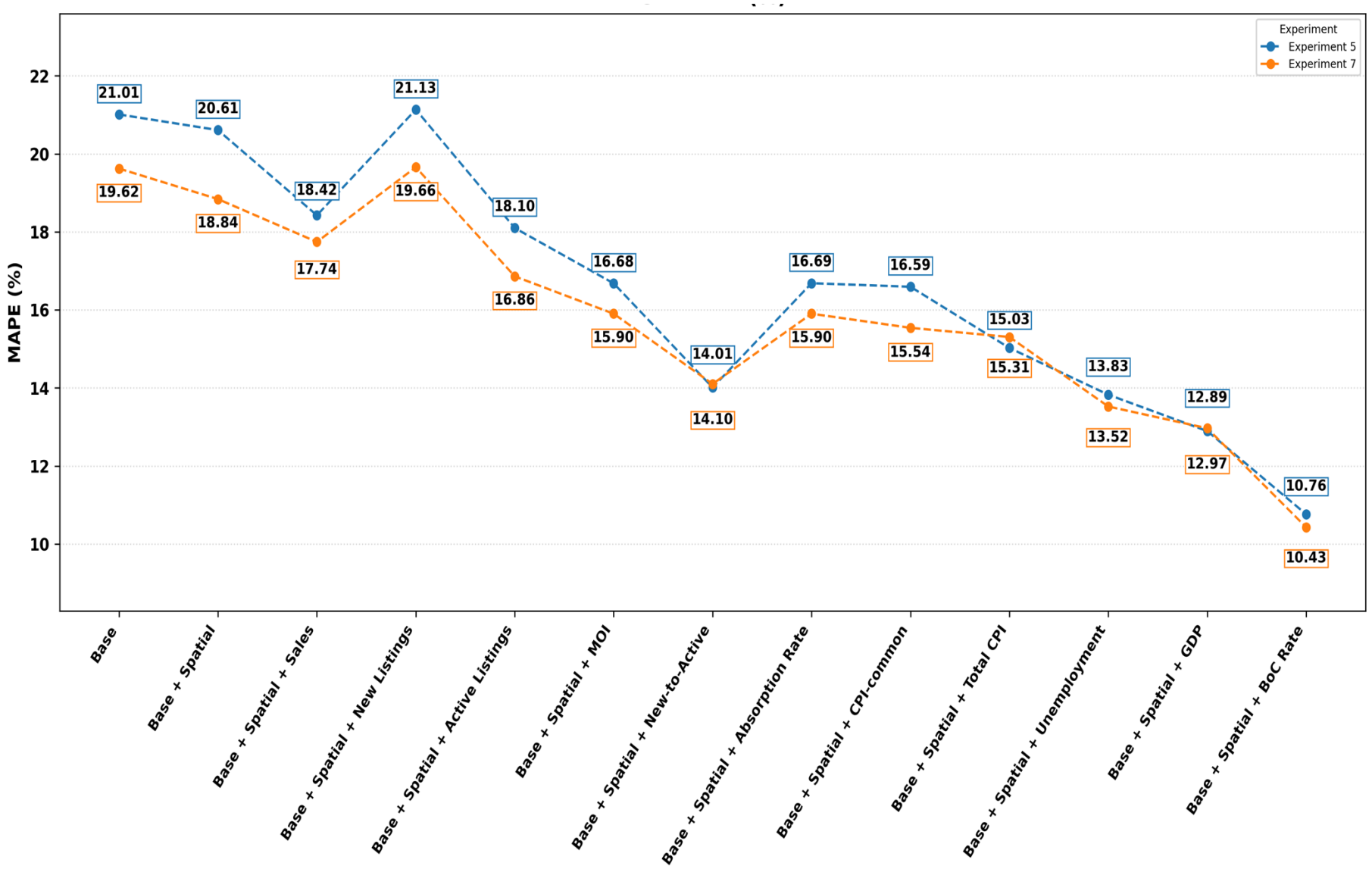

Figure 45. Gradient Boosting (GB) Model MAPE (%) Across Single External Feature Configurations in Experiments 5 and 7.

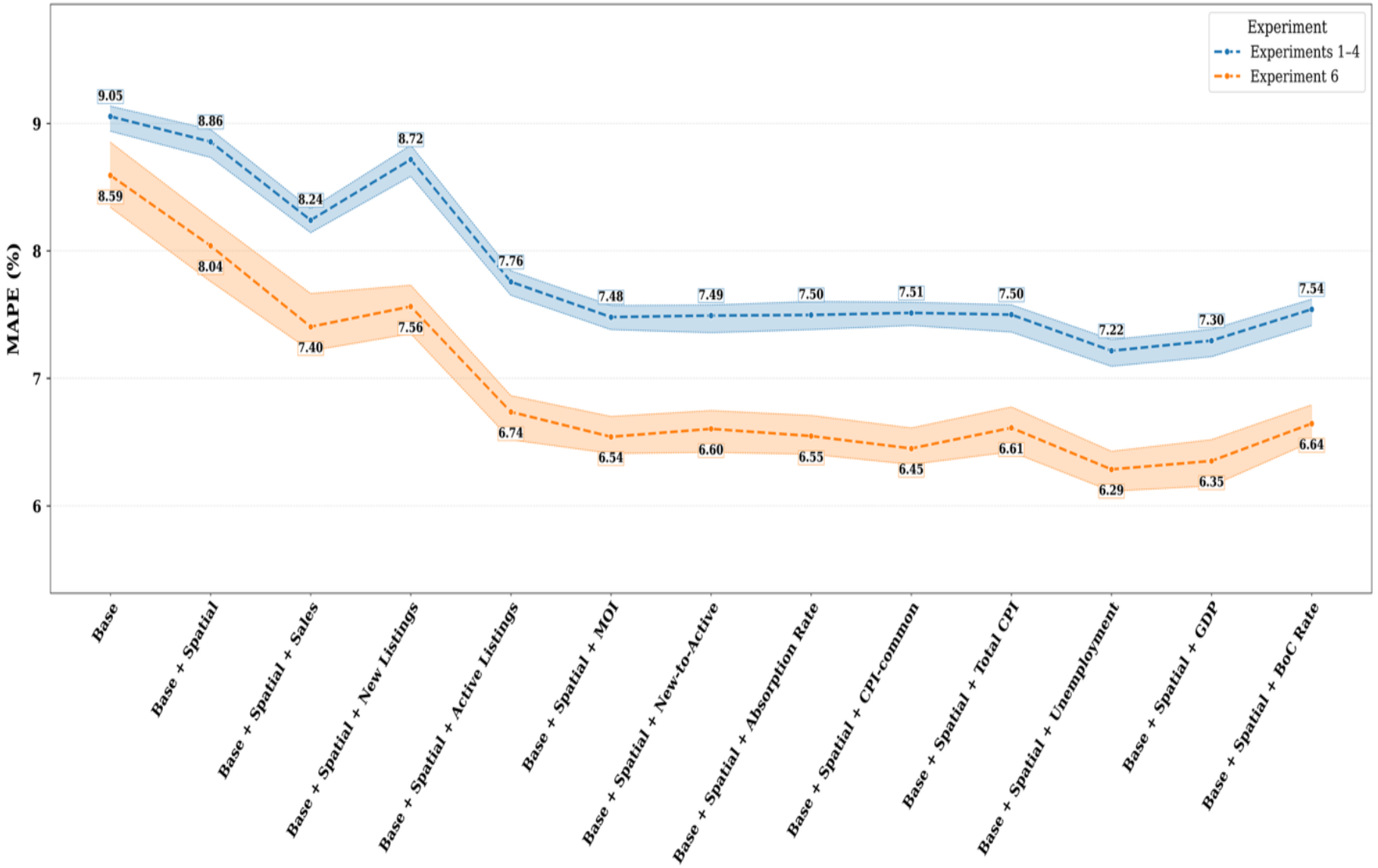

Figure 46. M5P Model MAPE (%) Across Single External Feature Configurations in Experiments 1–4 and 6.

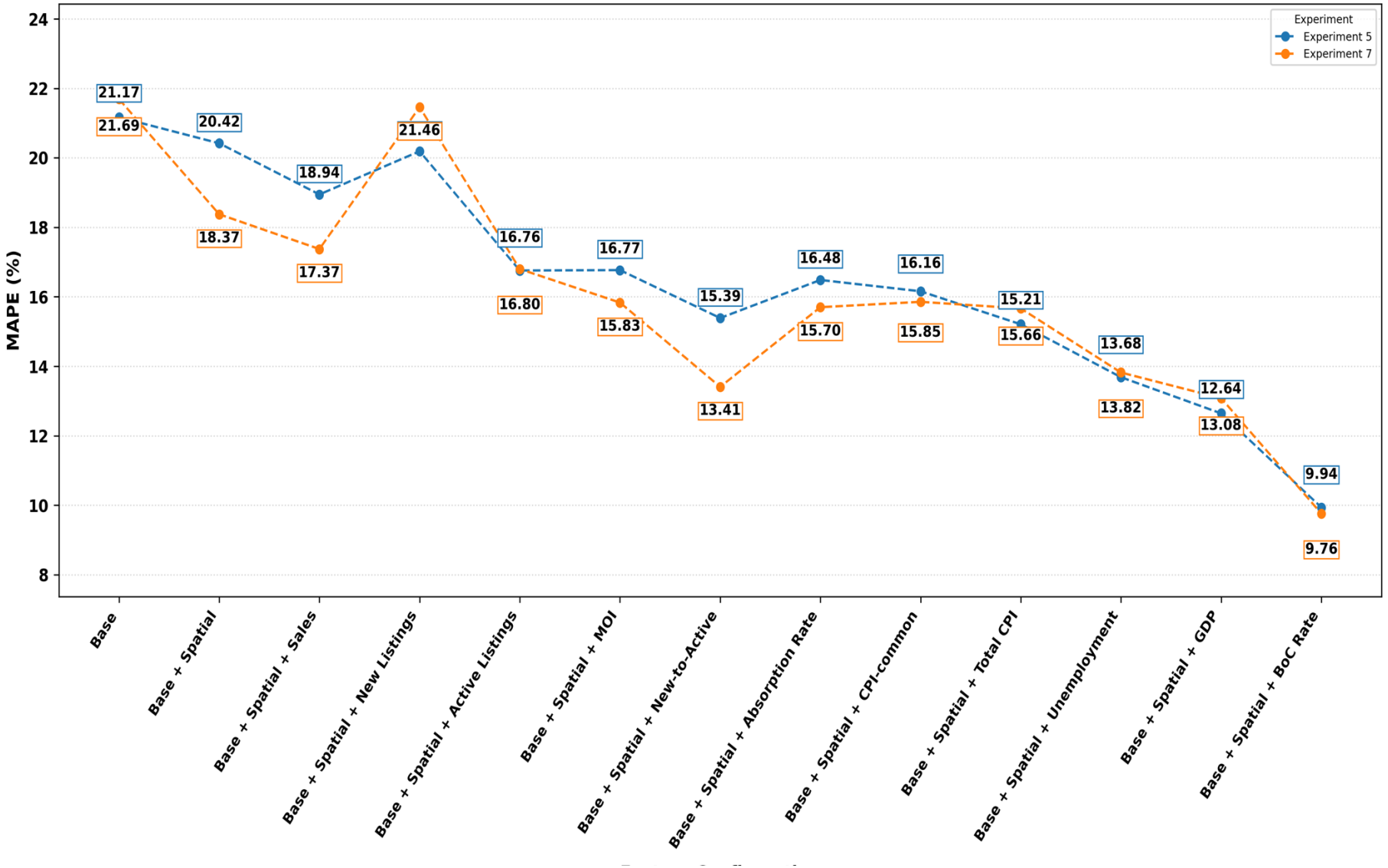

Figure 47. M5P Model MAPE (%) Across Single External Feature Configurations in Experiments 5 and 7.

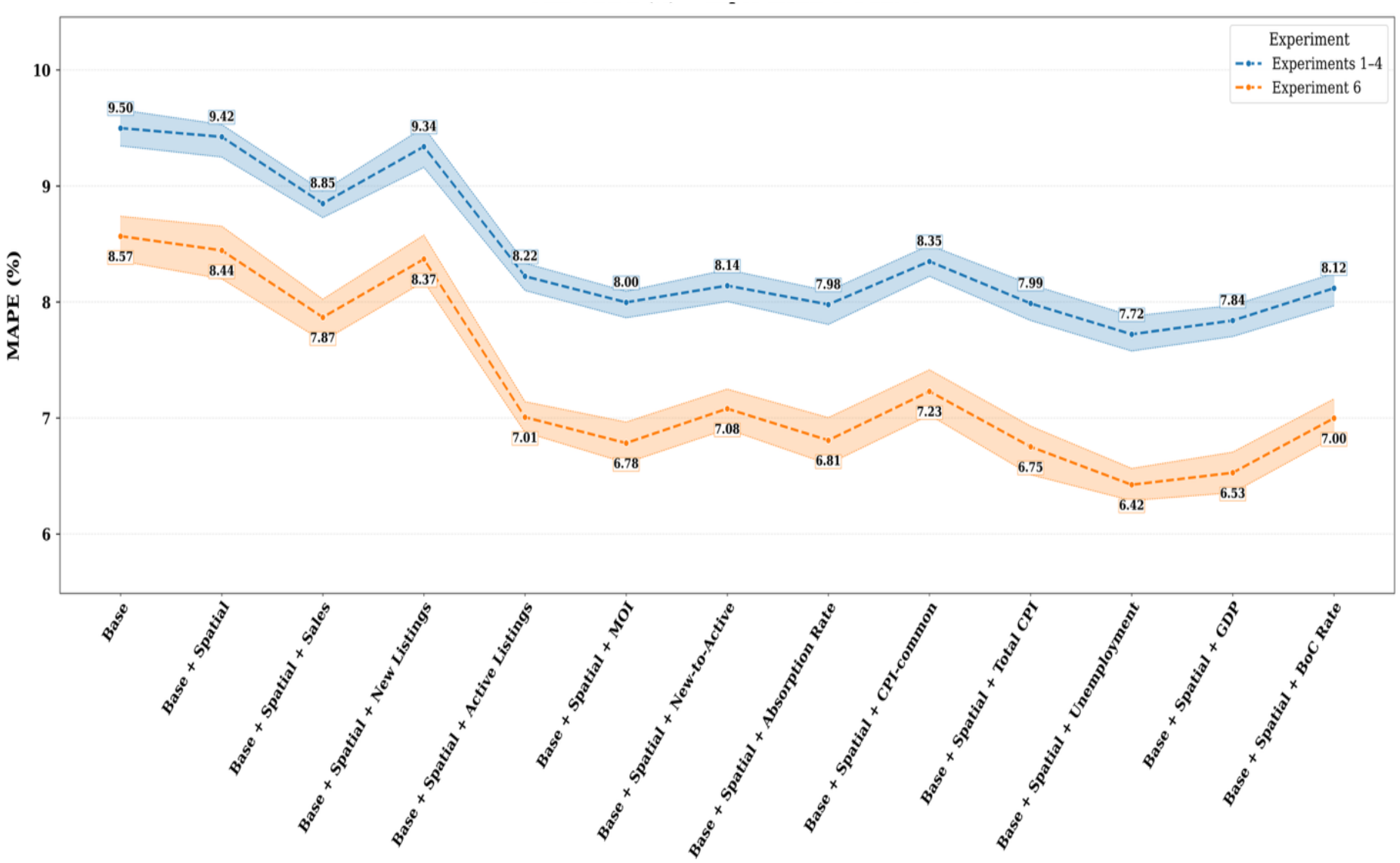

Figure 48. Multilayer Perceptron (MLP) Model MAPE (%) Across Single External Feature Configurations in Experiments 1–4 and 6.

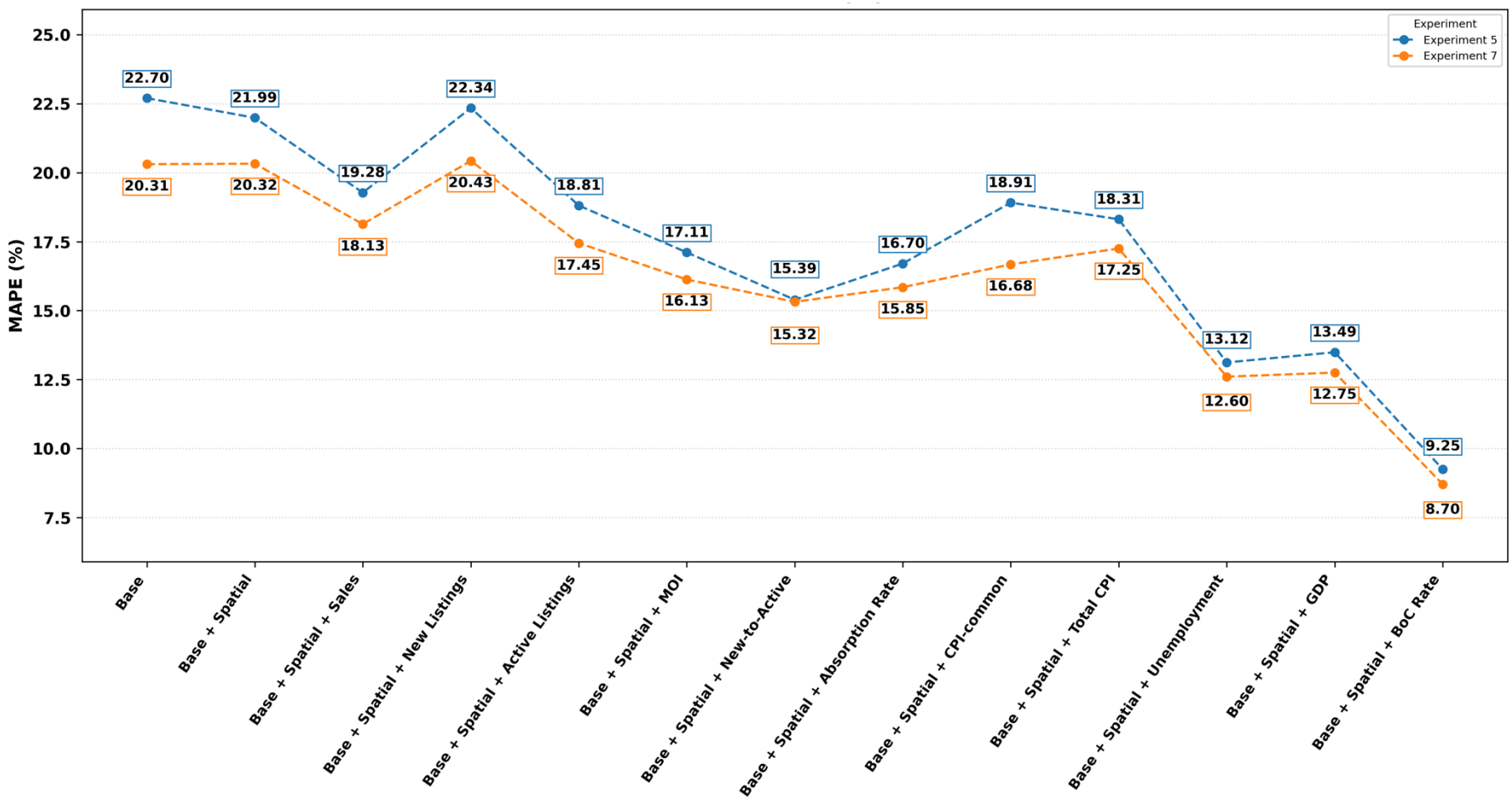

Figure 49. Multilayer Perceptron (MLP) Model MAPE (%) Across Single External Feature Configurations in Experiments 5 and 7.

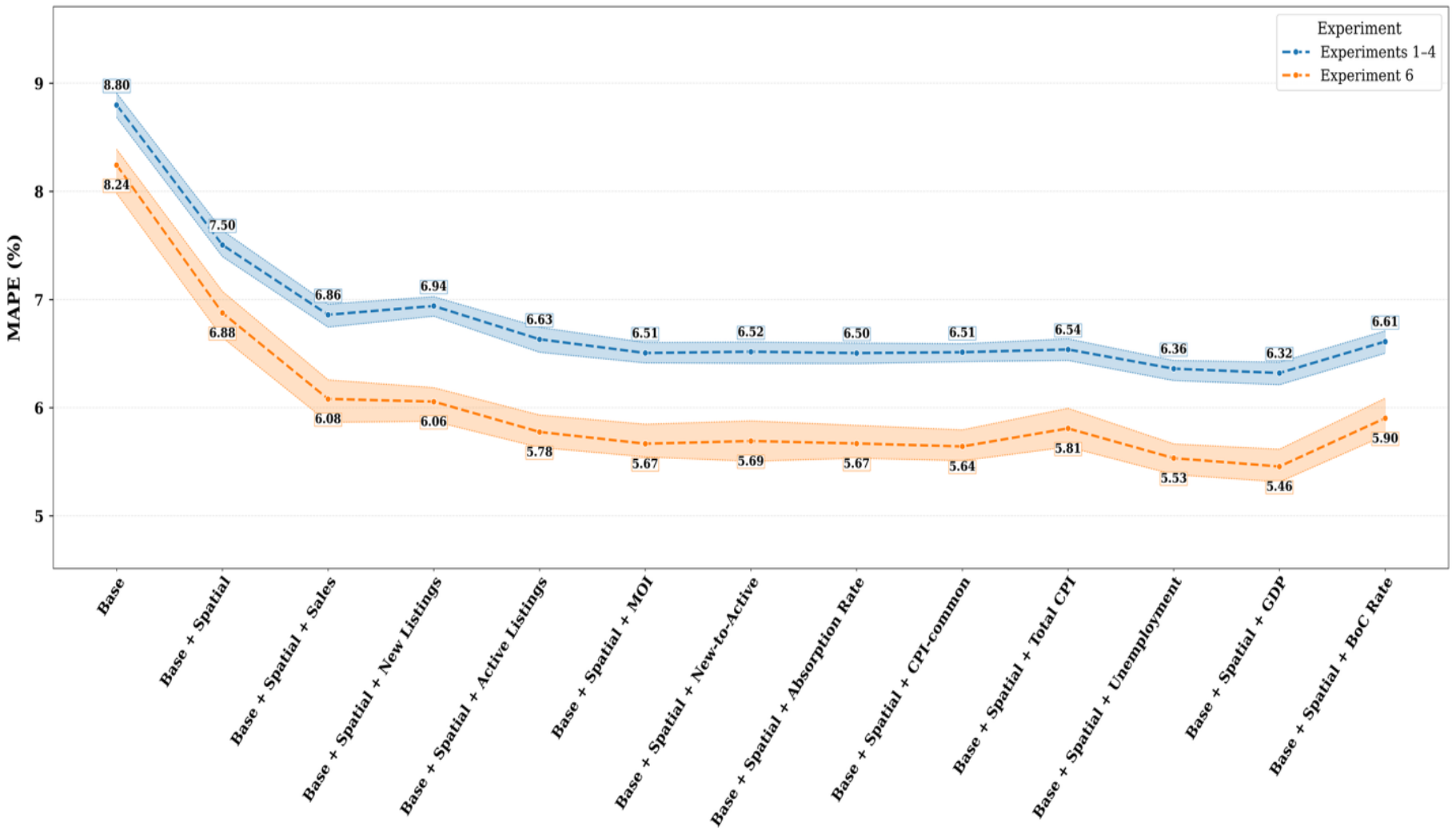

Figure 50. Random Forest (RF) Model MAPE (%) Across Single External Feature Configurations in Experiments 1–4 and 6.

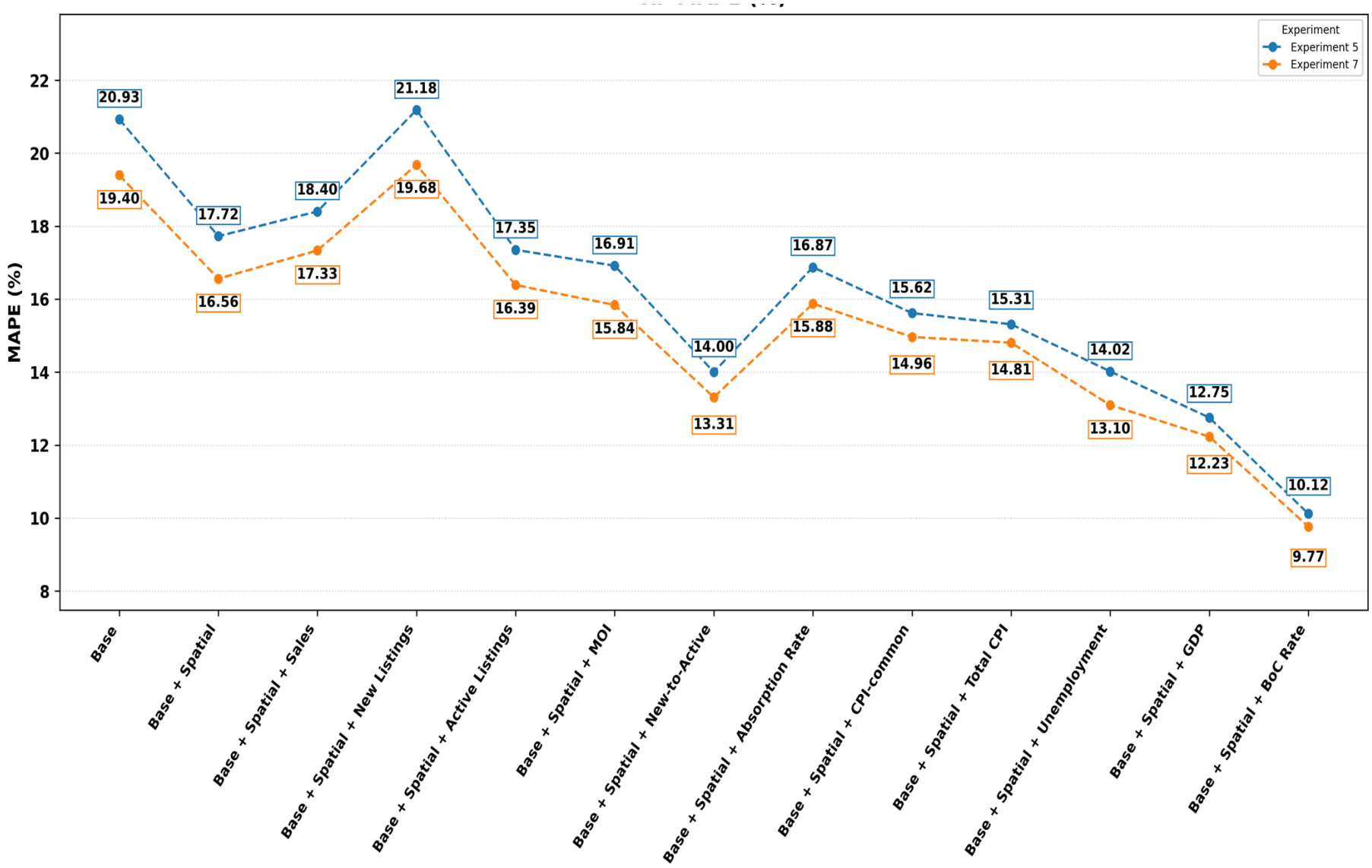

Figure 51. Random Forest (RF) Model MAPE (%) Across Single External Feature Configurations in Experiments 5 and 7.

Chapter 6: Conclusion

This study was conducted through seven sets of experiments to investigate the extent to which spatial information, Canadian macroeconomic factors, and local Toronto condo market indicators can be used in ML models evaluating Toronto Real Estate condo prices. For this purpose, experiments were conducted to evaluate the contribution of these feature groups using five ML algorithms: DT, RF, GB, M5P, and MLP.

Experiments 1–4 and 6 were evaluated using repeated cross-validation, whereas Experiments 5 and 7 were evaluated using an independent test set to assess the generalizability of the findings. The findings were consistent across experiments. All experiments have shown that incorporating spatial features into the datasets enables ML algorithms to learn spatial patterns, improving performance across all models.

Additionally, experiments 3 and 6 demonstrated that including Canadian macroeconomic factors such as GDP, CPI Total, CPI-common, Unemployment rate, and Bank of Canada rate further improves predictive performance beyond what is achieved with the base and spatial feature configurations.

Similarly, the inclusion of local market indicators and features engineered from them improved predictive performance beyond that achieved using only basic property characteristics and spatial features. Models incorporating features engineered from local market indicators demonstrated predictive performance comparable to that of the best-performing macroeconomic feature combinations. In many cases, when comparing these results with those achieved by the inclusion of macroeconomic factors, the MAPE% improvement values were smaller than the corresponding interquartile ranges (IQRs), indicating that the observed differences were within the expected variability of model performance across repeated evaluations. This finding supports incorporating local market indicators and features derived from them when macroeconomic data is not readily available.

A comparison of the results from Experiments 3, 5, 6, and 7 in Chapter 5 demonstrated that incorporating Canadian macroeconomic factors into the model improved predictive performance across all evaluated machine learning algorithms. It was noted that in each experiment, the better-performing feature configuration included at least one macroeconomic variable across all ML algorithms. These findings suggest that external features such as macroeconomic factors can contribute to the models' predictive performance.

Additionally, comparison of Experiments 1- 4 and Experiment 6 indicates that reduction of variability within the data results in lower prediction error. This finding supports the development of specialized models.

The results of these experiments demonstrate that predictive model performance is more strongly influenced by the relevance of the incorporated features rather than by the choice of machine learning algorithm. While differences in performance among algorithms were observed, the consistent improvement in model performance achieved through careful feature selection can't be ignored in developing accurate residential property valuation models.

The novelty of this study lies in an approach to evaluating individual family Toronto Condo residences by integrating multiple layers of information. This study is focusing on measurable property characteristics, spatial information, macroeconomic indicators, and local market conditions. Rather than considering these factors individually, this thesis evaluates their compounding effect. The results of experiments show that the predictive performance of ML models is influenced not only by measurable property characteristics but also by spatial, economic, and local market factors. By improving the understanding of these relationships, this study may support the development of more accurate and transparent data-driven valuation approaches for real estate professionals, financial institutions, policymakers, and regulators. It should be noted that a real estate transaction may also be influenced by social conditions and market shocks arising from government policy changes. The absence of these factors should not diminish the significance of the findings, but rather serve as guidance for future research.

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APPENDICES

Appendix A: Mapping Dataset ID with Corresponding Feature Configurations and Experiment number.

Dataset ID	Dataset Configuration
D001	Basic
D002	Basic + Spatial
D003	Basic + Spatial + AR
D004	Basic + Spatial + Active Listings
D005	Basic + Spatial + BoC
D006	Basic + Spatial + BoC + AR
D007	Basic + Spatial + BoC + Active Listings
D008	Basic + Spatial + BoC + MOI
D009	Basic + Spatial + BoC + New Listings
D010	Basic + Spatial + BoC + NtoA
D011	Basic + Spatial + BoC + Sales
D012	Basic + Spatial + CPI-common
D013	Basic + Spatial + CPI-common + AR
D014	Basic + Spatial + CPI-common + Active Listings
D015	Basic + Spatial + CPI-common + BoC
D016	Basic + Spatial + CPI-common + BoC + AR
D017	Basic + Spatial + CPI-common + BoC + Active Listings
D018	Basic + Spatial + CPI-common + BoC + MOI
D019	Basic + Spatial + CPI-common + BoC + New Listings
D020	Basic + Spatial + CPI-common + BoC + NtoA
D021	Basic + Spatial + CPI-common + BoC + Sales
D022	Basic + Spatial + CPI-common + MOI
D023	Basic + Spatial + CPI-common + New Listings
D024	Basic + Spatial + CPI-common + NtoA
D025	Basic + Spatial + CPI-common + Sales
D026	Basic + Spatial + CPI-common + UNEMP
D027	Basic + Spatial + CPI-common + UNEMP + AR
D028	Basic + Spatial + CPI-common + UNEMP + Active Listings
D029	Basic + Spatial + CPI-common + UNEMP + BoC
D030	Basic + Spatial + CPI-common + UNEMP + BoC + AR
D031	Basic + Spatial + CPI-common + UNEMP + BoC + Active Listings
D032	Basic + Spatial + CPI-common + UNEMP + BoC + MOI
D033	Basic + Spatial + CPI-common + UNEMP + BoC + New Listings
D034	Basic + Spatial + CPI-common + UNEMP + BoC + NtoA
D035	Basic + Spatial + CPI-common + UNEMP + BoC + Sales
D036	Basic + Spatial + CPI-common + UNEMP + MOI
D037	Basic + Spatial + CPI-common + UNEMP + New Listings
D038	Basic + Spatial + CPI-common + UNEMP + NtoA
D039	Basic + Spatial + CPI-common + UNEMP + Sales
D040	Basic + Spatial + GDP
D041	Basic + Spatial + GDP + AR
D042	Basic + Spatial + GDP + Active Listings
D043	Basic + Spatial + GDP + BoC
D044	Basic + Spatial + GDP + BoC + AR
D045	Basic + Spatial + GDP + BoC + Active Listings
D046	Basic + Spatial + GDP + BoC + MOI
D047	Basic + Spatial + GDP + BoC + New Listings
D048	Basic + Spatial + GDP + BoC + NtoA
D049	Basic + Spatial + GDP + BoC + Sales
D050	Basic + Spatial + GDP + CPI-common
D051	Basic + Spatial + GDP + CPI-common + AR
D052	Basic + Spatial + GDP + CPI-common + Active Listings

Appendix A (continued)

Dataset ID	Dataset Configuration
D053	Basic + Spatial + GDP + CPI-common + BoC
D054	Basic + Spatial + GDP + CPI-common + BoC + AR
D055	Basic + Spatial + GDP + CPI-common + BoC + Active Listings
D056	Basic + Spatial + GDP + CPI-common + BoC + MOI
D057	Basic + Spatial + GDP + CPI-common + BoC + New Listings
D058	Basic + Spatial + GDP + CPI-common + BoC + NtoA
D059	Basic + Spatial + GDP + CPI-common + BoC + Sales
D060	Basic + Spatial + GDP + CPI-common + MOI
D061	Basic + Spatial + GDP + CPI-common + New Listings
D062	Basic + Spatial + GDP + CPI-common + NtoA
D063	Basic + Spatial + GDP + CPI-common + Sales
D064	Basic + Spatial + GDP + CPI-common + UNEMP
D065	Basic + Spatial + GDP + CPI-common + UNEMP + AR
D066	Basic + Spatial + GDP + CPI-common + UNEMP + Active Listings
D067	Basic + Spatial + GDP + CPI-common + UNEMP + BoC
D068	Basic + Spatial + GDP + CPI-common + UNEMP + BoC + AR
D069	Basic + Spatial + GDP + CPI-common + UNEMP + BoC + Active Listings
D070	Basic + Spatial + GDP + CPI-common + UNEMP + BoC + MOI
D071	Basic + Spatial + GDP + CPI-common + UNEMP + BoC + New Listings
D072	Basic + Spatial + GDP + CPI-common + UNEMP + BoC + NtoA
D073	Basic + Spatial + GDP + CPI-common + UNEMP + BoC + Sales
D074	Basic + Spatial + GDP + CPI-common + UNEMP + MOI
D075	Basic + Spatial + GDP + CPI-common + UNEMP + New Listings
D076	Basic + Spatial + GDP + CPI-common + UNEMP + NtoA
D077	Basic + Spatial + GDP + CPI-common + UNEMP + Sales
D078	Basic + Spatial + GDP + MOI
D079	Basic + Spatial + GDP + New Listings
D080	Basic + Spatial + GDP + NtoA
D081	Basic + Spatial + GDP + Sales
D082	Basic + Spatial + GDP + Total CPI
D083	Basic + Spatial + GDP + Total CPI + AR
D084	Basic + Spatial + GDP + Total CPI + Active Listings
D085	Basic + Spatial + GDP + Total CPI + BoC
D086	Basic + Spatial + GDP + Total CPI + BoC + AR
D087	Basic + Spatial + GDP + Total CPI + BoC + Active Listings
D088	Basic + Spatial + GDP + Total CPI + BoC + MOI
D089	Basic + Spatial + GDP + Total CPI + BoC + New Listings
D090	Basic + Spatial + GDP + Total CPI + BoC + NtoA
D091	Basic + Spatial + GDP + Total CPI + BoC + Sales
D092	Basic + Spatial + GDP + Total CPI + CPI-common
D093	Basic + Spatial + GDP + Total CPI + CPI-common + AR
D094	Basic + Spatial + GDP + Total CPI + CPI-common + Active Listings
D095	Basic + Spatial + GDP + Total CPI + CPI-common + BoC
D096	Basic + Spatial + GDP + Total CPI + CPI-common + BoC + AR
D097	Basic + Spatial + GDP + Total CPI + CPI-common + BoC + Active Listings
D098	Basic + Spatial + GDP + Total CPI + CPI-common + BoC + MOI
D099	Basic + Spatial + GDP + Total CPI + CPI-common + BoC + New Listings
D100	Basic + Spatial + GDP + Total CPI + CPI-common + BoC + NtoA
D101	Basic + Spatial + GDP + Total CPI + CPI-common + BoC + Sales
D102	Basic + Spatial + GDP + Total CPI + CPI-common + MOI
D103	Basic + Spatial + GDP + Total CPI + CPI-common + New Listings
D104	Basic + Spatial + GDP + Total CPI + CPI-common + NtoA
D105	Basic + Spatial + GDP + Total CPI + CPI-common + Sales
D106	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP
D107	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + AR
D108	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + Active Listings
D109	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + BoC

Appendix A (continued)

Dataset ID	Dataset Configuration
D110	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + BoC + AR
D111	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + BoC + Active Listings
D112	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + BoC + MOI
D113	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + BoC + New Listings
D114	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + BoC + NtoA
D115	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + BoC + Sales
D116	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + MOI
D117	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + New Listings
D118	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + NtoA
D119	Basic + Spatial + GDP + Total CPI + CPI-common + UNEMP + Sales
D120	Basic + Spatial + GDP + Total CPI + MOI
D121	Basic + Spatial + GDP + Total CPI + New Listings
D122	Basic + Spatial + GDP + Total CPI + NtoA
D123	Basic + Spatial + GDP + Total CPI + Sales
D124	Basic + Spatial + GDP + Total CPI + UNEMP
D125	Basic + Spatial + GDP + Total CPI + UNEMP + AR
D126	Basic + Spatial + GDP + Total CPI + UNEMP + Active Listings
D127	Basic + Spatial + GDP + Total CPI + UNEMP + BoC
D128	Basic + Spatial + GDP + Total CPI + UNEMP + BoC + AR
D129	Basic + Spatial + GDP + Total CPI + UNEMP + BoC + Active Listings
D130	Basic + Spatial + GDP + Total CPI + UNEMP + BoC + MOI
D131	Basic + Spatial + GDP + Total CPI + UNEMP + BoC + New Listings
D132	Basic + Spatial + GDP + Total CPI + UNEMP + BoC + NtoA
D133	Basic + Spatial + GDP + Total CPI + UNEMP + BoC + Sales
D134	Basic + Spatial + GDP + Total CPI + UNEMP + MOI
D135	Basic + Spatial + GDP + Total CPI + UNEMP + New Listings
D136	Basic + Spatial + GDP + Total CPI + UNEMP + NtoA
D137	Basic + Spatial + GDP + Total CPI + UNEMP + Sales
D138	Basic + Spatial + GDP + UNEMP
D139	Basic + Spatial + GDP + UNEMP + AR
D140	Basic + Spatial + GDP + UNEMP + Active Listings
D141	Basic + Spatial + GDP + UNEMP + BoC
D142	Basic + Spatial + GDP + UNEMP + BoC + AR
D143	Basic + Spatial + GDP + UNEMP + BoC + Active Listings
D144	Basic + Spatial + GDP + UNEMP + BoC + MOI
D145	Basic + Spatial + GDP + UNEMP + BoC + New Listings
D146	Basic + Spatial + GDP + UNEMP + BoC + NtoA
D147	Basic + Spatial + GDP + UNEMP + BoC + Sales
D148	Basic + Spatial + GDP + UNEMP + MOI
D149	Basic + Spatial + GDP + UNEMP + New Listings
D150	Basic + Spatial + GDP + UNEMP + NtoA
D151	Basic + Spatial + GDP + UNEMP + Sales
D152	Basic + Spatial + MOI
D153	Basic + Spatial + New Listings
D154	Basic + Spatial + NtoA
D155	Basic + Spatial + Sales
D156	Basic + Spatial + Total CPI
D157	Basic + Spatial + Total CPI + AR
D158	Basic + Spatial + Total CPI + Active Listings
D159	Basic + Spatial + Total CPI + BoC
D160	Basic + Spatial + Total CPI + BoC + AR
D161	Basic + Spatial + Total CPI + BoC + Active Listings
D162	Basic + Spatial + Total CPI + BoC + MOI

Apenddix A (continued)

Dataset ID	Dataset Configuration
D163	Basic + Spatial + Total CPI + BoC + New Listings
D164	Basic + Spatial + Total CPI + BoC + NtoA
D165	Basic + Spatial + Total CPI + BoC + Sales
D166	Basic + Spatial + Total CPI + CPI-common
D167	Basic + Spatial + Total CPI + CPI-common + AR
D168	Basic + Spatial + Total CPI + CPI-common + Active Listings
D169	Basic + Spatial + Total CPI + CPI-common + BoC
D170	Basic + Spatial + Total CPI + CPI-common + BoC + AR
D171	Basic + Spatial + Total CPI + CPI-common + BoC + Active Listings
D172	Basic + Spatial + Total CPI + CPI-common + BoC + MOI
D173	Basic + Spatial + Total CPI + CPI-common + BoC + New Listings
D174	Basic + Spatial + Total CPI + CPI-common + BoC + NtoA
D175	Basic + Spatial + Total CPI + CPI-common + BoC + Sales
D176	Basic + Spatial + Total CPI + CPI-common + MOI
D177	Basic + Spatial + Total CPI + CPI-common + New Listings
D178	Basic + Spatial + Total CPI + CPI-common + NtoA
D179	Basic + Spatial + Total CPI + CPI-common + Sales
D180	Basic + Spatial + Total CPI + CPI-common + UNEMP
D181	Basic + Spatial + Total CPI + CPI-common + UNEMP + AR
D182	Basic + Spatial + Total CPI + CPI-common + UNEMP + Active Listings
D183	Basic + Spatial + Total CPI + CPI-common + UNEMP + BoC
D184	Basic + Spatial + Total CPI + CPI-common + UNEMP + BoC + AR
D185	Basic + Spatial + Total CPI + CPI-common + UNEMP + BoC + Active Listings
D186	Basic + Spatial + Total CPI + CPI-common + UNEMP + BoC + MOI
D187	Basic + Spatial + Total CPI + CPI-common + UNEMP + BoC + New Listings
D188	Basic + Spatial + Total CPI + CPI-common + UNEMP + BoC + NtoA
D189	Basic + Spatial + Total CPI + CPI-common + UNEMP + BoC + Sales
D190	Basic + Spatial + Total CPI + CPI-common + UNEMP + MOI
D191	Basic + Spatial + Total CPI + CPI-common + UNEMP + New Listings
D192	Basic + Spatial + Total CPI + CPI-common + UNEMP + NtoA
D193	Basic + Spatial + Total CPI + CPI-common + UNEMP + Sales
D194	Basic + Spatial + Total CPI + MOI
D195	Basic + Spatial + Total CPI + New Listings
D196	Basic + Spatial + Total CPI + NtoA
D197	Basic + Spatial + Total CPI + Sales
D198	Basic + Spatial + Total CPI + UNEMP
D199	Basic + Spatial + Total CPI + UNEMP + AR
D200	Basic + Spatial + Total CPI + UNEMP + Active Listings
D201	Basic + Spatial + Total CPI + UNEMP + BoC
D202	Basic + Spatial + Total CPI + UNEMP + BoC + AR
D203	Basic + Spatial + Total CPI + UNEMP + BoC + Active Listings
D204	Basic + Spatial + Total CPI + UNEMP + BoC + MOI
D205	Basic + Spatial + Total CPI + UNEMP + BoC + New Listings
D206	Basic + Spatial + Total CPI + UNEMP + BoC + NtoA
D207	Basic + Spatial + Total CPI + UNEMP + BoC + Sales
D208	Basic + Spatial + Total CPI + UNEMP + MOI
D209	Basic + Spatial + Total CPI + UNEMP + New Listings
D210	Basic + Spatial + Total CPI + UNEMP + NtoA
D211	Basic + Spatial + Total CPI + UNEMP + Sales
D212	Basic + Spatial + UNEMP
D213	Basic + Spatial + UNEMP + AR
D214	Basic + Spatial + UNEMP + Active Listings
D215	Basic + Spatial + UNEMP + BoC
D216	Basic + Spatial + UNEMP + BoC + AR
D217	Basic + Spatial + UNEMP + BoC + Active Listings
D218	Basic + Spatial + UNEMP + BoC + MOI
D219	Basic + Spatial + UNEMP + BoC + New Listings

Appendix A (continued)

Dataset ID	Dataset Configuration
D220	Basic + Spatial + UNEMP + BoC + NtoA
D221	Basic + Spatial + UNEMP + BoC + Sales
D222	Basic + Spatial + UNEMP + MOI
D223	Basic + Spatial + UNEMP + New Listings
D224	Basic + Spatial + UNEMP + NtoA
D225	Basic + Spatial + UNEMP + Sales

Appendix B: Average, First Quartile (Q1), and Third Quartile (Q3) of Model Performance Metrics for Dataset–Model Combinations in Experiments 1–4.

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D001	DT	11.5188	11.4035	11.6133	0.1141	0.1130	0.1150	101244	100092	102353	0.1550	0.1529	0.1568	0.5741	0.5615	0.5876
D001	RF	8.7991	8.6846	8.9082	0.0869	0.0860	0.0878	76371	75415	77350	0.1169	0.1154	0.1184	0.7577	0.7492	0.7660
D001	GB	9.1630	9.0523	9.2893	0.0896	0.0886	0.0905	76730	76034	77381	0.1175	0.1162	0.1187	0.7555	0.7491	0.7623
D001	MLP	9.4987	9.3451	9.6568	0.0934	0.0920	0.0950	80296	78746	81504	0.1229	0.1207	0.1247	0.7321	0.7215	0.7413
D001	M5P	9.0540	8.9387	9.1346	0.0890	0.0883	0.0897	76718	75898	77579	0.1175	0.1162	0.1188	0.7555	0.7504	0.7624
D002	DT	9.9044	9.7483	10.0263	0.0981	0.0969	0.0993	88956	87647	90007	0.1362	0.1343	0.1376	0.6713	0.6620	0.6814
D002	RF	7.5049	7.3977	7.6375	0.0739	0.0730	0.0750	65472	64505	66409	0.1002	0.0985	0.1019	0.8219	0.8154	0.8279
D002	GB	8.8972	8.7873	9.0221	0.0867	0.0857	0.0876	74169	73345	74952	0.1135	0.1122	0.1146	0.7715	0.7648	0.7788
D002	MLP	9.4236	9.2493	9.5293	0.0925	0.0911	0.0935	79142	77889	80210	0.1212	0.1192	0.1227	0.7398	0.7310	0.7495
D002	M5P	8.8554	8.7325	8.9519	0.0868	0.0858	0.0879	76529	74184	76134	0.1172	0.1131	0.1164	0.7542	0.7582	0.7727
D003	DT	9.0663	8.9151	9.1894	0.0907	0.0892	0.0919	82868	81759	84307	0.1269	0.1250	0.1290	0.7146	0.7039	0.7247
D003	RF	6.5047	6.4073	6.5980	0.0648	0.0638	0.0656	58882	58059	59735	0.0901	0.0887	0.0915	0.8560	0.8520	0.8614
D003	GB	7.4318	7.3361	7.5178	0.0730	0.0719	0.0737	64437	63725	65014	0.0986	0.0974	0.0995	0.8275	0.8231	0.8326
D003	MLP	7.9781	7.8065	8.0935	0.0789	0.0774	0.0803	69722	68506	71076	0.1067	0.1047	0.1088	0.7980	0.7916	0.8047
D003	M5P	7.4973	7.3821	7.6031	0.0742	0.0732	0.0751	66806	64912	66844	0.1023	0.0995	0.1022	0.8140	0.8126	0.8263
D004	DT	9.2253	9.1169	9.3304	0.0922	0.0912	0.0931	84013	82919	85119	0.1286	0.1269	0.1302	0.7068	0.6970	0.7143
D004	RF	6.6325	6.5125	6.7428	0.0659	0.0649	0.0670	59678	58592	60492	0.0914	0.0896	0.0926	0.8520	0.8476	0.8562
D004	GB	7.6121	7.4918	7.7421	0.0747	0.0737	0.0756	65708	64823	66429	0.1006	0.0993	0.1018	0.8207	0.8155	0.8259
D004	MLP	8.2214	8.0991	8.3340	0.0813	0.0801	0.0827	71545	70108	72918	0.1095	0.1075	0.1112	0.7873	0.7776	0.7943
D004	M5P	7.7571	7.6519	7.8435	0.0767	0.0757	0.0776	68338	66646	68644	0.1046	0.1019	0.1053	0.8057	0.8035	0.8148
D005	DT	8.9934	8.9270	9.0782	0.0897	0.0889	0.0908	82324	81571	83197	0.1260	0.1246	0.1272	0.7185	0.7110	0.7254
D005	RF	6.6116	6.5030	6.7095	0.0657	0.0647	0.0666	59532	58757	60065	0.0911	0.0896	0.0921	0.8528	0.8485	0.8576
D005	GB	7.5941	7.4682	7.6875	0.0747	0.0737	0.0754	65647	65018	66447	0.1005	0.0994	0.1016	0.8210	0.8164	0.8262
D005	MLP	8.1185	7.9667	8.2463	0.0805	0.0793	0.0822	70903	69499	72368	0.1085	0.1068	0.1107	0.7911	0.7828	0.7993
D005	M5P	7.5413	7.4138	7.6205	0.0747	0.0736	0.0754	69511	65214	66980	0.1064	0.0999	0.1027	0.7880	0.8117	0.8242
D006	DT	8.8670	8.7712	8.9793	0.0887	0.0875	0.0896	81171	79839	82418	0.1243	0.1222	0.1261	0.7263	0.7183	0.7352
D006	RF	6.3905	6.2682	6.4875	0.0637	0.0626	0.0644	58024	57159	58636	0.0888	0.0874	0.0901	0.8601	0.8562	0.8655
D006	GB	7.2945	7.1794	7.3770	0.0717	0.0707	0.0725	63616	62907	64282	0.0974	0.0961	0.0984	0.8319	0.8273	0.8372
D006	MLP	7.6009	7.4351	7.7364	0.0755	0.0739	0.0770	67465	65934	69019	0.1033	0.1014	0.1055	0.8108	0.8016	0.8201
D006	M5P	7.2145	7.1008	7.3108	0.0717	0.0707	0.0726	65129	63277	65646	0.0997	0.0968	0.1004	0.8228	0.8219	0.8344
D007	DT	8.8967	8.7791	9.0402	0.0890	0.0875	0.0903	81560	80398	82569	0.1249	0.1231	0.1263	0.7236	0.7174	0.7323
D007	RF	6.4058	6.2966	6.4918	0.0638	0.0628	0.0647	58160	57516	58932	0.0890	0.0878	0.0904	0.8595	0.8553	0.8638
D007	GB	7.3191	7.2016	7.4013	0.0720	0.0710	0.0727	63821	63051	64531	0.0977	0.0966	0.0988	0.8308	0.8267	0.8363
D007	MLP	7.7430	7.6130	7.8562	0.0770	0.0756	0.0781	68628	67312	69634	0.1051	0.1032	0.1069	0.8043	0.7967	0.8124
D007	M5P	7.2586	7.1528	7.3443	0.0721	0.0711	0.0729	66069	63379	65849	0.1011	0.0972	0.1003	0.8160	0.8216	0.8329
D008	DT	8.8832	8.7715	9.0240	0.0889	0.0877	0.0901	81417	80439	82504	0.1246	0.1231	0.1263	0.7246	0.7164	0.7332

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D008	RF	6.3911	6.2582	6.4901	0.0637	0.0626	0.0644	58025	57141	58592	0.0888	0.0873	0.0900	0.8601	0.8560	0.8656
D008	GB	7.2945	7.1794	7.3770	0.0717	0.0707	0.0725	63616	62907	64282	0.0974	0.0961	0.0984	0.8319	0.8273	0.8372
D008	MLP	7.6674	7.5359	7.7721	0.0762	0.0749	0.0774	68011	66672	69558	0.1041	0.1020	0.1060	0.8078	0.7994	0.8164
D008	M5P	7.2201	7.0959	7.3088	0.0717	0.0707	0.0726	65460	63297	65893	0.1002	0.0968	0.1007	0.8209	0.8211	0.8345
D009	DT	9.0320	8.9184	9.1492	0.0902	0.0890	0.0911	82599	81576	83852	0.1265	0.1249	0.1284	0.7166	0.7081	0.7238
D009	RF	6.4640	6.3547	6.5558	0.0644	0.0632	0.0653	58563	57660	59168	0.0897	0.0881	0.0908	0.8575	0.8544	0.8625
D009	GB	7.5125	7.3880	7.5963	0.0738	0.0727	0.0746	65115	64523	65898	0.0997	0.0986	0.1008	0.8239	0.8196	0.8294
D009	MLP	8.1101	7.9759	8.2416	0.0805	0.0791	0.0820	70773	69528	71970	0.1083	0.1063	0.1104	0.7919	0.7833	0.7997
D009	M5P	7.5531	7.4204	7.6234	0.0748	0.0738	0.0754	70364	65257	67227	0.1077	0.1002	0.1028	0.7776	0.8111	0.8243
D010	DT	8.8331	8.7287	8.9430	0.0884	0.0873	0.0895	81064	80019	82144	0.1241	0.1226	0.1259	0.7270	0.7174	0.7377
D010	RF	6.3451	6.2372	6.4241	0.0633	0.0624	0.0642	57731	56744	58523	0.0884	0.0869	0.0897	0.8615	0.8587	0.8661
D010	GB	7.2498	7.1395	7.3378	0.0713	0.0702	0.0721	63321	62631	64009	0.0969	0.0958	0.0979	0.8335	0.8287	0.8385
D010	MLP	7.5223	7.4136	7.6267	0.0748	0.0737	0.0759	66887	65559	68087	0.1024	0.1007	0.1042	0.8141	0.8063	0.8212
D010	M5P	7.1445	6.9891	7.2098	0.0710	0.0699	0.0719	66733	62780	64574	0.1022	0.0958	0.0990	0.8062	0.8257	0.8381
D011	DT	8.9315	8.8649	9.0391	0.0892	0.0882	0.0902	81477	80368	82716	0.1247	0.1227	0.1266	0.7242	0.7180	0.7331
D011	RF	6.4627	6.3607	6.5322	0.0644	0.0633	0.0652	58475	57607	59126	0.0895	0.0881	0.0904	0.8580	0.8537	0.8630
D011	GB	7.3980	7.2825	7.4754	0.0726	0.0718	0.0734	64214	63487	64813	0.0983	0.0971	0.0993	0.8287	0.8249	0.8337
D011	MLP	7.7841	7.6406	7.9508	0.0773	0.0759	0.0789	68464	67247	69848	0.1048	0.1027	0.1069	0.8053	0.7979	0.8128
D011	M5P	7.3424	7.2365	7.4097	0.0728	0.0718	0.0735	66507	63795	65667	0.1018	0.0975	0.1008	0.8132	0.8191	0.8312
D012	DT	8.9492	8.8178	9.0708	0.0894	0.0881	0.0903	82021	81142	82794	0.1256	0.1240	0.1267	0.7205	0.7128	0.7276
D012	RF	6.5128	6.4250	6.5908	0.0648	0.0639	0.0656	58880	57855	59681	0.0901	0.0885	0.0916	0.8560	0.8513	0.8608
D012	GB	7.4854	7.3953	7.5765	0.0735	0.0727	0.0743	65047	64338	65604	0.0996	0.0987	0.1005	0.8242	0.8188	0.8298
D012	MLP	8.3499	8.2215	8.4894	0.0824	0.0813	0.0836	72618	71343	73823	0.1112	0.1093	0.1131	0.7809	0.7707	0.7893
D012	M5P	7.5137	7.4149	7.5973	0.0744	0.0737	0.0752	67525	65249	66795	0.1034	0.1001	0.1025	0.8082	0.8139	0.8239
D013	DT	8.9346	8.7563	9.0425	0.0894	0.0880	0.0905	81848	80722	82912	0.1253	0.1231	0.1270	0.7216	0.7125	0.7319
D013	RF	6.3922	6.2915	6.4617	0.0637	0.0625	0.0647	58122	57105	58897	0.0890	0.0874	0.0902	0.8596	0.8557	0.8645
D013	GB	7.3202	7.2231	7.4135	0.0719	0.0708	0.0728	63807	62972	64402	0.0977	0.0963	0.0987	0.8309	0.8261	0.8354
D013	MLP	7.8804	7.7278	7.9579	0.0780	0.0764	0.0790	69188	67840	70413	0.1059	0.1039	0.1076	0.8011	0.7947	0.8096
D013	M5P	7.2834	7.1971	7.3714	0.0723	0.0716	0.0731	65903	63817	65519	0.1009	0.0977	0.1004	0.8186	0.8201	0.8316
D014	DT	8.9414	8.8412	9.0328	0.0895	0.0883	0.0904	82083	81188	83321	0.1257	0.1240	0.1274	0.7201	0.7117	0.7262
D014	RF	6.4308	6.3382	6.5150	0.0641	0.0630	0.0651	58301	57196	59133	0.0893	0.0874	0.0908	0.8588	0.8541	0.8639
D014	GB	7.4164	7.3189	7.5252	0.0729	0.0717	0.0737	64571	63759	65185	0.0989	0.0977	0.0999	0.8268	0.8211	0.8321
D014	MLP	8.1405	8.0154	8.2791	0.0805	0.0795	0.0818	71162	69817	71953	0.1089	0.1070	0.1105	0.7896	0.7823	0.7977
D014	M5P	7.4726	7.3601	7.5668	0.0740	0.0731	0.0749	67029	64902	66661	0.1026	0.0995	0.1022	0.8118	0.8149	0.8251
D015	DT	8.7445	8.6624	8.8583	0.0875	0.0865	0.0884	80492	79284	81596	0.1232	0.1215	0.1252	0.7308	0.7220	0.7400
D015	RF	6.3205	6.2096	6.4172	0.0630	0.0621	0.0639	57668	56882	58424	0.0883	0.0871	0.0896	0.8618	0.8571	0.8668
D015	GB	7.2534	7.1541	7.3434	0.0713	0.0701	0.0721	63424	62700	64109	0.0971	0.0961	0.0982	0.8329	0.8285	0.8374
D015	MLP	7.6048	7.4818	7.6952	0.0755	0.0745	0.0763	67609	66284	68683	0.1035	0.1019	0.1048	0.8101	0.8030	0.8172

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D015	M5P	7.2074	7.0742	7.2752	0.0716	0.0704	0.0723	66595	62990	65782	0.1019	0.0968	0.1008	0.8102	0.8207	0.8348
D016	DT	8.7901	8.6820	8.8950	0.0880	0.0871	0.0891	80868	79643	82200	0.1238	0.1220	0.1258	0.7283	0.7203	0.7367
D016	RF	6.3378	6.2374	6.4340	0.0632	0.0622	0.0641	57762	56893	58417	0.0884	0.0870	0.0897	0.8614	0.8576	0.8670
D016	GB	7.2232	7.0982	7.3114	0.0711	0.0699	0.0719	63199	62434	63957	0.0968	0.0956	0.0978	0.8341	0.8297	0.8391
D016	MLP	7.5576	7.4351	7.6334	0.0751	0.0740	0.0760	67396	66182	68242	0.1032	0.1013	0.1046	0.8112	0.8052	0.8184
D016	M5P	7.1647	7.0251	7.2548	0.0713	0.0701	0.0722	65805	62979	66368	0.1007	0.0964	0.1018	0.8185	0.8180	0.8362
D017	DT	8.7755	8.6635	8.8991	0.0878	0.0868	0.0890	80812	79654	81924	0.1237	0.1219	0.1256	0.7287	0.7205	0.7375
D017	RF	6.3367	6.2356	6.4294	0.0632	0.0622	0.0641	57784	57089	58640	0.0885	0.0873	0.0898	0.8613	0.8575	0.8665
D017	GB	7.2427	7.1368	7.3304	0.0712	0.0701	0.0720	63350	62563	64069	0.0970	0.0959	0.0980	0.8333	0.8291	0.8383
D017	MLP	7.6336	7.5319	7.7275	0.0759	0.0748	0.0767	67945	66629	68921	0.1040	0.1019	0.1057	0.8082	0.8015	0.8165
D017	M5P	7.1984	7.0570	7.2737	0.0715	0.0703	0.0723	66649	63014	66039	0.1020	0.0966	0.1013	0.8105	0.8185	0.8351
D018	DT	8.7911	8.7051	8.9019	0.0881	0.0871	0.0891	80812	79521	81993	0.1237	0.1220	0.1258	0.7287	0.7221	0.7352
D018	RF	6.3391	6.2366	6.4453	0.0632	0.0622	0.0642	57775	56858	58453	0.0884	0.0871	0.0896	0.8613	0.8574	0.8669
D018	GB	7.2232	7.0982	7.3114	0.0711	0.0699	0.0719	63199	62434	63957	0.0968	0.0956	0.0978	0.8341	0.8297	0.8391
D018	MLP	7.6043	7.4956	7.7010	0.0756	0.0743	0.0766	67737	66462	68896	0.1037	0.1017	0.1053	0.8093	0.8029	0.8168
D018	M5P	7.1696	7.0524	7.2695	0.0713	0.0702	0.0723	65914	63080	66449	0.1009	0.0965	0.1018	0.8179	0.8174	0.8358
D019	DT	8.7913	8.7053	8.8861	0.0880	0.0873	0.0889	80903	80187	81695	0.1239	0.1225	0.1249	0.7281	0.7203	0.7345
D019	RF	6.3334	6.2257	6.4211	0.0632	0.0622	0.0641	57751	56949	58527	0.0884	0.0872	0.0896	0.8614	0.8578	0.8661
D019	GB	7.2480	7.1478	7.3292	0.0713	0.0702	0.0720	63383	62660	64075	0.0970	0.0960	0.0981	0.8331	0.8286	0.8375
D019	MLP	7.6583	7.5058	7.7952	0.0761	0.0748	0.0776	68161	66833	69365	0.1044	0.1023	0.1058	0.8069	0.7998	0.8154
D019	M5P	7.1965	7.0424	7.2615	0.0714	0.0702	0.0722	67352	62878	66036	0.1031	0.0963	0.1010	0.8019	0.8191	0.8363
D020	DT	8.8070	8.6578	8.9165	0.0881	0.0868	0.0895	80927	79814	82063	0.1239	0.1221	0.1256	0.7279	0.7176	0.7387
D020	RF	6.3336	6.2377	6.4183	0.0632	0.0622	0.0640	57695	56605	58449	0.0883	0.0868	0.0895	0.8617	0.8588	0.8663
D020	GB	7.2159	7.1094	7.3058	0.0710	0.0698	0.0718	63157	62441	63839	0.0967	0.0955	0.0977	0.8343	0.8297	0.8394
D020	MLP	7.5588	7.3930	7.6882	0.0751	0.0736	0.0764	67427	66267	68577	0.1032	0.1012	0.1049	0.8111	0.8044	0.8187
D020	M5P	7.1225	6.9735	7.1969	0.0708	0.0697	0.0717	66023	62662	64482	0.1011	0.0960	0.0989	0.8133	0.8269	0.8380
D021	DT	8.8245	8.7672	8.9283	0.0883	0.0875	0.0892	81075	80185	82089	0.1241	0.1230	0.1255	0.7269	0.7192	0.7365
D021	RF	6.3465	6.2394	6.4414	0.0633	0.0622	0.0642	57781	56924	58524	0.0885	0.0871	0.0896	0.8613	0.8578	0.8668
D021	GB	7.2350	7.1275	7.3337	0.0711	0.0700	0.0719	63269	62561	63950	0.0969	0.0957	0.0980	0.8337	0.8290	0.8387
D021	MLP	7.6193	7.4897	7.7083	0.0756	0.0743	0.0765	67812	66454	68724	0.1038	0.1016	0.1050	0.8089	0.8028	0.8156
D021	M5P	7.1493	7.0052	7.2256	0.0711	0.0699	0.0717	65515	62697	65863	0.1003	0.0963	0.1011	0.8194	0.8204	0.8366
D022	DT	8.9222	8.7939	9.0111	0.0893	0.0883	0.0901	81693	80657	82811	0.1251	0.1235	0.1267	0.7227	0.7148	0.7313
D022	RF	6.3938	6.2931	6.4662	0.0638	0.0625	0.0647	58142	57174	58826	0.0890	0.0875	0.0903	0.8595	0.8560	0.8644
D022	GB	7.3203	7.2231	7.4135	0.0719	0.0708	0.0728	63808	62972	64402	0.0977	0.0963	0.0987	0.8309	0.8261	0.8354
D022	MLP	7.9382	7.7979	8.0365	0.0786	0.0773	0.0795	69906	68543	70786	0.1070	0.1051	0.1081	0.7969	0.7889	0.8055
D022	M5P	7.2884	7.2112	7.3781	0.0724	0.0717	0.0731	65805	63882	66120	0.1007	0.0978	0.1010	0.8195	0.8191	0.8313
D023	DT	8.8423	8.7173	8.9295	0.0885	0.0874	0.0894	81290	80229	82336	0.1244	0.1225	0.1260	0.7255	0.7148	0.7343
D023	RF	6.3928	6.2861	6.4839	0.0638	0.0628	0.0648	58189	57373	59003	0.0891	0.0877	0.0905	0.8593	0.8552	0.8644

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D023	GB	7.3533	7.2628	7.4444	0.0722	0.0713	0.0731	64105	63473	64692	0.0981	0.0970	0.0993	0.8293	0.8246	0.8349
D023	MLP	8.2844	8.1277	8.4393	0.0816	0.0803	0.0829	71909	70730	72750	0.1101	0.1084	0.1117	0.7852	0.7782	0.7937
D023	M5P	7.3663	7.2555	7.4485	0.0730	0.0722	0.0739	67088	64406	65905	0.1027	0.0986	0.1009	0.8087	0.8192	0.8287
D024	DT	8.8619	8.7712	9.0051	0.0886	0.0876	0.0899	81136	79919	82290	0.1242	0.1223	0.1262	0.7265	0.7169	0.7370
D024	RF	6.3731	6.2618	6.4595	0.0636	0.0626	0.0646	57981	57038	58671	0.0888	0.0871	0.0898	0.8603	0.8563	0.8650
D024	GB	7.3116	7.1904	7.4147	0.0718	0.0707	0.0727	63697	62974	64247	0.0975	0.0963	0.0984	0.8315	0.8265	0.8360
D024	MLP	7.9302	7.7876	8.0599	0.0784	0.0772	0.0798	69449	68294	70330	0.1063	0.1043	0.1079	0.7996	0.7920	0.8067
D024	M5P	7.4538	7.2945	7.5554	0.0738	0.0727	0.0747	67861	64697	66893	0.1039	0.0989	0.1024	0.8054	0.8137	0.8256
D025	DT	8.9008	8.7852	9.0254	0.0890	0.0881	0.0902	81610	80364	82666	0.1249	0.1232	0.1266	0.7233	0.7142	0.7329
D025	RF	6.4088	6.2889	6.4931	0.0639	0.0628	0.0647	58155	57130	58937	0.0890	0.0874	0.0903	0.8595	0.8556	0.8649
D025	GB	7.3697	7.2507	7.4635	0.0723	0.0713	0.0733	64080	63306	64711	0.0981	0.0967	0.0992	0.8294	0.8250	0.8351
D025	MLP	8.0339	7.8971	8.1333	0.0793	0.0780	0.0803	70175	69075	71083	0.1074	0.1055	0.1087	0.7954	0.7874	0.8031
D025	M5P	7.2780	7.1799	7.3362	0.0722	0.0717	0.0731	65647	63892	65398	0.1005	0.0976	0.1002	0.8198	0.8206	0.8310
D026	DT	8.7064	8.5767	8.8102	0.0871	0.0858	0.0881	80116	78995	81212	0.1227	0.1211	0.1245	0.7333	0.7248	0.7419
D026	RF	6.2857	6.1795	6.3643	0.0626	0.0616	0.0635	57423	56531	58117	0.0879	0.0865	0.0891	0.8630	0.8596	0.8666
D026	GB	7.2408	7.1431	7.3446	0.0712	0.0702	0.0720	63316	62631	64036	0.0969	0.0957	0.0981	0.8335	0.8289	0.8385
D026	MLP	7.6703	7.5022	7.8067	0.0762	0.0748	0.0775	68196	66720	69704	0.1044	0.1021	0.1064	0.8067	0.7982	0.8160
D026	M5P	7.1578	7.0316	7.2468	0.0712	0.0701	0.0720	65423	62889	64699	0.1002	0.0963	0.0991	0.8196	0.8246	0.8376
D027	DT	8.7399	8.6117	8.8349	0.0875	0.0864	0.0887	80553	79196	81766	0.1233	0.1208	0.1252	0.7304	0.7219	0.7410
D027	RF	6.3097	6.2144	6.3819	0.0629	0.0619	0.0638	57570	56542	58333	0.0881	0.0865	0.0890	0.8623	0.8593	0.8672
D027	GB	7.2343	7.1213	7.3345	0.0711	0.0701	0.0721	63254	62487	63986	0.0968	0.0955	0.0979	0.8338	0.8287	0.8384
D027	MLP	7.6463	7.5165	7.7479	0.0760	0.0749	0.0770	68127	67079	69344	0.1043	0.1025	0.1059	0.8071	0.7994	0.8136
D027	M5P	7.1058	7.0090	7.1879	0.0708	0.0697	0.0716	64553	62525	64689	0.0988	0.0957	0.0987	0.8260	0.8249	0.8389
D028	DT	8.7453	8.6313	8.8746	0.0876	0.0865	0.0886	80573	79672	81798	0.1234	0.1217	0.1252	0.7302	0.7205	0.7406
D028	RF	6.3029	6.1971	6.3710	0.0628	0.0618	0.0636	57542	56703	58303	0.0881	0.0869	0.0893	0.8624	0.8589	0.8664
D028	GB	7.2388	7.1383	7.3491	0.0712	0.0701	0.0720	63303	62597	63965	0.0969	0.0957	0.0980	0.8335	0.8290	0.8386
D028	MLP	7.6470	7.5054	7.7588	0.0760	0.0746	0.0772	68005	66624	68847	0.1041	0.1024	0.1054	0.8078	0.8022	0.8156
D028	M5P	7.1557	7.0471	7.2425	0.0712	0.0701	0.0720	65159	62941	65060	0.0998	0.0964	0.0993	0.8222	0.8240	0.8365
D029	DT	8.7101	8.6283	8.8339	0.0872	0.0862	0.0885	80371	79056	81460	0.1230	0.1209	0.1248	0.7316	0.7238	0.7415
D029	RF	6.2878	6.1774	6.3532	0.0627	0.0617	0.0636	57416	56576	58251	0.0879	0.0866	0.0890	0.8630	0.8594	0.8675
D029	GB	7.2183	7.1197	7.3201	0.0710	0.0700	0.0718	63199	62579	63954	0.0968	0.0957	0.0979	0.8341	0.8300	0.8395
D029	MLP	7.6405	7.4950	7.7333	0.0760	0.0745	0.0772	68124	66700	69445	0.1043	0.1022	0.1061	0.8071	0.7984	0.8160
D029	M5P	7.1600	7.0344	7.2467	0.0712	0.0701	0.0722	65931	62849	64555	0.1009	0.0964	0.0989	0.8142	0.8244	0.8374
D030	DT	8.7480	8.6361	8.8756	0.0877	0.0865	0.0887	80604	79268	82045	0.1234	0.1213	0.1253	0.7300	0.7217	0.7380
D030	RF	6.3146	6.2219	6.3856	0.0630	0.0619	0.0639	57587	56587	58388	0.0882	0.0866	0.0893	0.8622	0.8590	0.8677
D030	GB	7.2134	7.0958	7.3083	0.0710	0.0698	0.0718	63140	62397	63862	0.0967	0.0956	0.0976	0.8344	0.8300	0.8392
D030	MLP	7.5807	7.4668	7.6779	0.0754	0.0742	0.0765	67860	66598	68877	0.1039	0.1017	0.1054	0.8087	0.7996	0.8172
D030	M5P	7.1028	7.0134	7.1954	0.0707	0.0697	0.0716	64249	62497	64642	0.0984	0.0958	0.0990	0.8282	0.8246	0.8382

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D023	GB	7.3533	7.2628	7.4444	0.0722	0.0713	0.0731	64105	63473	64692	0.0981	0.0970	0.0993	0.8293	0.8246	0.8349
D023	MLP	8.2844	8.1277	8.4393	0.0816	0.0803	0.0829	71909	70730	72750	0.1101	0.1084	0.1117	0.7852	0.7782	0.7937
D023	M5P	7.3663	7.2555	7.4485	0.0730	0.0722	0.0739	67088	64406	65905	0.1027	0.0986	0.1009	0.8087	0.8192	0.8287
D024	DT	8.8619	8.7712	9.0051	0.0886	0.0876	0.0899	81136	79919	82290	0.1242	0.1223	0.1262	0.7265	0.7169	0.7370
D024	RF	6.3731	6.2618	6.4595	0.0636	0.0626	0.0646	57981	57038	58671	0.0888	0.0871	0.0898	0.8603	0.8563	0.8650
D024	GB	7.3116	7.1904	7.4147	0.0718	0.0707	0.0727	63697	62974	64247	0.0975	0.0963	0.0984	0.8315	0.8265	0.8360
D024	MLP	7.9302	7.7876	8.0599	0.0784	0.0772	0.0798	69449	68294	70330	0.1063	0.1043	0.1079	0.7996	0.7920	0.8067
D024	M5P	7.4538	7.2945	7.5554	0.0738	0.0727	0.0747	67861	64697	66893	0.1039	0.0989	0.1024	0.8054	0.8137	0.8256
D025	DT	8.9008	8.7852	9.0254	0.0890	0.0881	0.0902	81610	80364	82666	0.1249	0.1232	0.1266	0.7233	0.7142	0.7329
D025	RF	6.4088	6.2889	6.4931	0.0639	0.0628	0.0647	58155	57130	58937	0.0890	0.0874	0.0903	0.8595	0.8556	0.8649
D025	GB	7.3697	7.2507	7.4635	0.0723	0.0713	0.0733	64080	63306	64711	0.0981	0.0967	0.0992	0.8294	0.8250	0.8351
D025	MLP	8.0339	7.8971	8.1333	0.0793	0.0780	0.0803	70175	69075	71083	0.1074	0.1055	0.1087	0.7954	0.7874	0.8031
D025	M5P	7.2780	7.1799	7.3362	0.0722	0.0717	0.0731	65647	63892	65398	0.1005	0.0976	0.1002	0.8198	0.8206	0.8310
D026	DT	8.7064	8.5767	8.8102	0.0871	0.0858	0.0881	80116	78995	81212	0.1227	0.1211	0.1245	0.7333	0.7248	0.7419
D026	RF	6.2857	6.1795	6.3643	0.0626	0.0616	0.0635	57423	56531	58117	0.0879	0.0865	0.0891	0.8630	0.8596	0.8666
D026	GB	7.2408	7.1431	7.3446	0.0712	0.0702	0.0720	63316	62631	64036	0.0969	0.0957	0.0981	0.8335	0.8289	0.8385
D026	MLP	7.6703	7.5022	7.8067	0.0762	0.0748	0.0775	68196	66720	69704	0.1044	0.1021	0.1064	0.8067	0.7982	0.8160
D026	M5P	7.1578	7.0316	7.2468	0.0712	0.0701	0.0720	65423	62889	64699	0.1002	0.0963	0.0991	0.8196	0.8246	0.8376
D027	DT	8.7399	8.6117	8.8349	0.0875	0.0864	0.0887	80553	79196	81766	0.1233	0.1208	0.1252	0.7304	0.7219	0.7410
D027	RF	6.3097	6.2144	6.3819	0.0629	0.0619	0.0638	57570	56542	58333	0.0881	0.0865	0.0890	0.8623	0.8593	0.8672
D027	GB	7.2343	7.1213	7.3345	0.0711	0.0701	0.0721	63254	62487	63986	0.0968	0.0955	0.0979	0.8338	0.8287	0.8384
D027	MLP	7.6463	7.5165	7.7479	0.0760	0.0749	0.0770	68127	67079	69344	0.1043	0.1025	0.1059	0.8071	0.7994	0.8136
D027	M5P	7.1058	7.0090	7.1879	0.0708	0.0697	0.0716	64553	62525	64689	0.0988	0.0957	0.0987	0.8260	0.8249	0.8389
D028	DT	8.7453	8.6313	8.8746	0.0876	0.0865	0.0886	80573	79672	81798	0.1234	0.1217	0.1252	0.7302	0.7205	0.7406
D028	RF	6.3029	6.1971	6.3710	0.0628	0.0618	0.0636	57542	56703	58303	0.0881	0.0869	0.0893	0.8624	0.8589	0.8664
D028	GB	7.2388	7.1383	7.3491	0.0712	0.0701	0.0720	63303	62597	63965	0.0969	0.0957	0.0980	0.8335	0.8290	0.8386
D028	MLP	7.6470	7.5054	7.7588	0.0760	0.0746	0.0772	68005	66624	68847	0.1041	0.1024	0.1054	0.8078	0.8022	0.8156
D028	M5P	7.1557	7.0471	7.2425	0.0712	0.0701	0.0720	65159	62941	65060	0.0998	0.0964	0.0993	0.8222	0.8240	0.8365
D029	DT	8.7101	8.6283	8.8339	0.0872	0.0862	0.0885	80371	79056	81460	0.1230	0.1209	0.1248	0.7316	0.7238	0.7415
D029	RF	6.2878	6.1774	6.3532	0.0627	0.0617	0.0636	57416	56576	58251	0.0879	0.0866	0.0890	0.8630	0.8594	0.8675
D029	GB	7.2183	7.1197	7.3201	0.0710	0.0700	0.0718	63199	62579	63954	0.0968	0.0957	0.0979	0.8341	0.8300	0.8395
D029	MLP	7.6405	7.4950	7.7333	0.0760	0.0745	0.0772	68124	66700	69445	0.1043	0.1022	0.1061	0.8071	0.7984	0.8160
D029	M5P	7.1600	7.0344	7.2467	0.0712	0.0701	0.0722	65931	62849	64555	0.1009	0.0964	0.0989	0.8142	0.8244	0.8374
D030	DT	8.7480	8.6361	8.8756	0.0877	0.0865	0.0887	80604	79268	82045	0.1234	0.1213	0.1253	0.7300	0.7217	0.7380
D030	RF	6.3146	6.2219	6.3856	0.0630	0.0619	0.0639	57587	56587	58388	0.0882	0.0866	0.0893	0.8622	0.8590	0.8677
D030	GB	7.2134	7.0958	7.3083	0.0710	0.0698	0.0718	63140	62397	63862	0.0967	0.0956	0.0976	0.8344	0.8300	0.8392
D030	MLP	7.5807	7.4668	7.6779	0.0754	0.0742	0.0765	67860	66598	68877	0.1039	0.1017	0.1054	0.8087	0.7996	0.8172
D030	M5P	7.1028	7.0134	7.1954	0.0707	0.0697	0.0716	64249	62497	64642	0.0984	0.0958	0.0990	0.8282	0.8246	0.8382

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D031	DT	8.7465	8.6470	8.8425	0.0877	0.0867	0.0886	80673	79695	81680	0.1235	0.1217	0.1253	0.7296	0.7215	0.7377
D031	RF	6.3055	6.2087	6.3721	0.0629	0.0619	0.0637	57555	56786	58457	0.0881	0.0867	0.0893	0.8624	0.8584	0.8671
D031	GB	7.2155	7.1133	7.3235	0.0710	0.0700	0.0718	63180	62514	63920	0.0967	0.0957	0.0978	0.8342	0.8300	0.8394
D031	MLP	7.6279	7.4888	7.7105	0.0759	0.0744	0.0769	68081	66772	68991	0.1042	0.1020	0.1057	0.8074	0.8018	0.8159
D031	M5P	7.1663	7.0639	7.2506	0.0712	0.0702	0.0722	65993	62926	65096	0.1010	0.0965	0.0994	0.8149	0.8233	0.8358
D032	DT	8.7451	8.6355	8.8668	0.0876	0.0866	0.0886	80603	79422	81682	0.1234	0.1217	0.1252	0.7301	0.7231	0.7361
D032	RF	6.3153	6.2190	6.3848	0.0630	0.0620	0.0639	57579	56614	58392	0.0881	0.0867	0.0894	0.8623	0.8590	0.8677
D032	GB	7.2135	7.0958	7.3083	0.0710	0.0698	0.0718	63141	62397	63862	0.0967	0.0956	0.0976	0.8344	0.8300	0.8392
D032	MLP	7.6310	7.5122	7.7335	0.0759	0.0744	0.0769	68119	66756	69346	0.1043	0.1022	0.1060	0.8072	0.8001	0.8157
D032	M5P	7.1159	7.0257	7.2005	0.0708	0.0698	0.0716	64761	62615	65082	0.0991	0.0959	0.0995	0.8250	0.8242	0.8381
D033	DT	8.7615	8.6234	8.8874	0.0878	0.0866	0.0891	80658	79509	81836	0.1235	0.1216	0.1256	0.7297	0.7192	0.7397
D033	RF	6.3047	6.2096	6.3826	0.0629	0.0619	0.0637	57552	56754	58407	0.0881	0.0867	0.0892	0.8624	0.8584	0.8669
D033	GB	7.2136	7.1169	7.3067	0.0710	0.0699	0.0717	63156	62511	63862	0.0967	0.0956	0.0977	0.8343	0.8299	0.8393
D033	MLP	7.5890	7.4632	7.6947	0.0755	0.0743	0.0767	67836	66540	68549	0.1039	0.1019	0.1051	0.8088	0.8022	0.8153
D033	M5P	7.1360	7.0124	7.2035	0.0709	0.0700	0.0719	66561	62677	64376	0.1019	0.0961	0.0987	0.8067	0.8247	0.8377
D034	DT	8.7785	8.6157	8.9121	0.0879	0.0864	0.0894	80753	79475	82227	0.1236	0.1218	0.1256	0.7290	0.7195	0.7388
D034	RF	6.3169	6.2174	6.3874	0.0630	0.0620	0.0639	57621	56700	58471	0.0882	0.0866	0.0895	0.8621	0.8581	0.8668
D034	GB	7.2072	7.1000	7.2982	0.0709	0.0697	0.0718	63081	62394	63828	0.0966	0.0955	0.0976	0.8347	0.8298	0.8399
D034	MLP	7.5958	7.4781	7.6973	0.0755	0.0742	0.0766	67962	66675	68995	0.1040	0.1021	0.1055	0.8081	0.8015	0.8168
D034	M5P	7.1010	6.9710	7.1623	0.0707	0.0695	0.0715	65712	62434	64358	0.1006	0.0958	0.0987	0.8153	0.8258	0.8385
D035	DT	8.7690	8.6687	8.8823	0.0878	0.0865	0.0890	80664	79586	81827	0.1235	0.1216	0.1252	0.7297	0.7216	0.7379
D035	RF	6.3209	6.2263	6.3774	0.0630	0.0619	0.0640	57600	56694	58411	0.0882	0.0867	0.0893	0.8622	0.8590	0.8670
D035	GB	7.2172	7.1200	7.3018	0.0710	0.0700	0.0718	63174	62386	63926	0.0967	0.0955	0.0977	0.8342	0.8298	0.8388
D035	MLP	7.5884	7.4833	7.6708	0.0754	0.0740	0.0764	67743	66432	68827	0.1037	0.1015	0.1054	0.8093	0.8037	0.8176
D035	M5P	7.1008	6.9998	7.1819	0.0707	0.0696	0.0715	64744	62505	64563	0.0991	0.0957	0.0990	0.8243	0.8251	0.8388
D036	DT	8.7458	8.6356	8.8524	0.0876	0.0866	0.0886	80638	79706	81744	0.1235	0.1217	0.1250	0.7298	0.7222	0.7381
D036	RF	6.3095	6.2175	6.3842	0.0629	0.0619	0.0638	57555	56476	58347	0.0881	0.0865	0.0891	0.8624	0.8594	0.8675
D036	GB	7.2343	7.1213	7.3345	0.0711	0.0701	0.0721	63254	62487	63986	0.0968	0.0955	0.0979	0.8338	0.8287	0.8384
D036	MLP	7.6138	7.4775	7.7274	0.0757	0.0742	0.0769	67818	66500	68804	0.1038	0.1019	0.1056	0.8089	0.8018	0.8182
D036	M5P	7.1066	7.0234	7.1933	0.0708	0.0697	0.0716	64511	62576	64999	0.0988	0.0958	0.0991	0.8266	0.8236	0.8386
D037	DT	8.7642	8.6449	8.8948	0.0878	0.0865	0.0889	80657	79605	81960	0.1235	0.1214	0.1254	0.7297	0.7200	0.7399
D037	RF	6.3031	6.1924	6.3915	0.0629	0.0618	0.0636	57541	56772	58252	0.0881	0.0870	0.0891	0.8624	0.8584	0.8668
D037	GB	7.2373	7.1318	7.3461	0.0712	0.0701	0.0720	63297	62628	64023	0.0969	0.0957	0.0980	0.8336	0.8291	0.8386
D037	MLP	7.6521	7.5141	7.7672	0.0760	0.0747	0.0773	68085	66427	69508	0.1042	0.1019	0.1064	0.8074	0.7992	0.8153
D037	M5P	7.1224	6.9977	7.2048	0.0708	0.0699	0.0717	65736	62625	64687	0.1006	0.0961	0.0990	0.8160	0.8254	0.8385
D038	DT	8.7837	8.6489	8.9058	0.0879	0.0866	0.0894	80671	79453	82225	0.1235	0.1216	0.1258	0.7296	0.7199	0.7382
D038	RF	6.3176	6.2147	6.3837	0.0630	0.0620	0.0639	57620	56577	58475	0.0882	0.0868	0.0895	0.8621	0.8582	0.8666
D038	GB	7.2299	7.1338	7.3271	0.0711	0.0700	0.0721	63210	62518	63924	0.0968	0.0955	0.0978	0.8340	0.8291	0.8382

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D038	MLP	7.6216	7.4872	7.7436	0.0758	0.0745	0.0770	68004	66633	69204	0.1041	0.1020	0.1055	0.8078	0.8025	0.8149
D038	M5P	7.0932	6.9544	7.1623	0.0706	0.0694	0.0714	65478	62366	64337	0.1002	0.0956	0.0986	0.8180	0.8268	0.8387
D039	DT	8.7810	8.6499	8.9134	0.0879	0.0865	0.0893	80756	79541	82141	0.1236	0.1220	0.1253	0.7291	0.7204	0.7376
D039	RF	6.3213	6.2177	6.3781	0.0630	0.0620	0.0639	57610	56600	58305	0.0882	0.0867	0.0892	0.8621	0.8588	0.8667
D039	GB	7.2373	7.1284	7.3352	0.0712	0.0701	0.0720	63270	62582	64039	0.0969	0.0956	0.0980	0.8337	0.8289	0.8385
D039	MLP	7.5958	7.4547	7.7250	0.0755	0.0739	0.0768	67733	66397	69033	0.1037	0.1019	0.1057	0.8093	0.8023	0.8167
D039	M5P	7.0908	6.9806	7.1692	0.0706	0.0695	0.0714	64606	62421	64554	0.0989	0.0956	0.0987	0.8254	0.8260	0.8396
D040	DT	8.7076	8.5845	8.8401	0.0871	0.0858	0.0883	80254	79229	81494	0.1229	0.1212	0.1249	0.7324	0.7229	0.7406
D040	RF	6.3201	6.2122	6.4205	0.0630	0.0620	0.0638	57624	56646	58433	0.0882	0.0867	0.0896	0.8620	0.8591	0.8664
D040	GB	7.2466	7.1463	7.3534	0.0713	0.0702	0.0722	63347	62693	64089	0.0970	0.0959	0.0981	0.8333	0.8285	0.8391
D040	MLP	7.8397	7.7025	7.9701	0.0777	0.0767	0.0787	69373	68014	70861	0.1062	0.1041	0.1084	0.8000	0.7916	0.8079
D040	M5P	7.2959	7.1702	7.3841	0.0724	0.0713	0.0733	65731	63636	65877	0.1006	0.0976	0.1009	0.8196	0.8189	0.8318
D041	DT	8.7838	8.6592	8.8847	0.0879	0.0870	0.0891	80849	79931	81874	0.1238	0.1226	0.1255	0.7284	0.7227	0.7353
D041	RF	6.3259	6.2139	6.4144	0.0631	0.0622	0.0640	57604	56632	58404	0.0882	0.0869	0.0895	0.8621	0.8589	0.8668
D041	GB	7.2138	7.1070	7.3050	0.0710	0.0699	0.0718	63146	62512	63908	0.0967	0.0955	0.0976	0.8344	0.8293	0.8399
D041	MLP	7.5743	7.4345	7.7362	0.0753	0.0738	0.0768	67423	66187	68558	0.1032	0.1013	0.1052	0.8111	0.8029	0.8191
D041	M5P	7.1880	7.0817	7.2853	0.0715	0.0703	0.0723	64720	62949	65407	0.0991	0.0966	0.0999	0.8256	0.8218	0.8353
D042	DT	8.7835	8.6768	8.8881	0.0879	0.0868	0.0890	80930	79759	82326	0.1239	0.1224	0.1256	0.7279	0.7194	0.7352
D042	RF	6.3340	6.2306	6.4282	0.0631	0.0621	0.0641	57713	56891	58617	0.0884	0.0869	0.0897	0.8616	0.8580	0.8661
D042	GB	7.2372	7.1373	7.3352	0.0712	0.0702	0.0721	63312	62622	64085	0.0969	0.0957	0.0979	0.8335	0.8286	0.8394
D042	MLP	7.6893	7.5619	7.8067	0.0764	0.0751	0.0777	68279	67248	69189	0.1045	0.1031	0.1061	0.8063	0.7995	0.8127
D042	M5P	7.2513	7.1262	7.3381	0.0721	0.0711	0.0729	65188	63495	65888	0.0998	0.0972	0.1005	0.8232	0.8190	0.8326
D043	DT	8.6984	8.5551	8.8122	0.0871	0.0856	0.0882	80208	79047	81337	0.1228	0.1209	0.1249	0.7327	0.7240	0.7400
D043	RF	6.3021	6.1892	6.3981	0.0628	0.0618	0.0638	57476	56559	58287	0.0880	0.0864	0.0894	0.8628	0.8597	0.8675
D043	GB	7.2316	7.1248	7.3317	0.0712	0.0701	0.0720	63296	62540	64053	0.0969	0.0958	0.0980	0.8336	0.8292	0.8391
D043	MLP	7.6362	7.4980	7.7606	0.0759	0.0746	0.0769	67890	66824	68990	0.1039	0.1023	0.1057	0.8085	0.8009	0.8162
D043	M5P	7.2067	7.0702	7.2836	0.0716	0.0704	0.0725	66472	63025	65366	0.1018	0.0965	0.1002	0.8105	0.8219	0.8351
D044	DT	8.7846	8.6644	8.8619	0.0879	0.0868	0.0889	80802	79681	81780	0.1237	0.1219	0.1253	0.7287	0.7227	0.7365
D044	RF	6.3294	6.2101	6.4313	0.0631	0.0622	0.0642	57639	56602	58467	0.0882	0.0867	0.0894	0.8620	0.8583	0.8665
D044	GB	7.2075	7.0875	7.2870	0.0709	0.0698	0.0717	63107	62409	63842	0.0966	0.0955	0.0976	0.8346	0.8294	0.8401
D044	MLP	7.5774	7.4340	7.6895	0.0754	0.0741	0.0766	67721	66471	68736	0.1037	0.1017	0.1054	0.8094	0.8029	0.8171
D044	M5P	7.1487	7.0384	7.2523	0.0711	0.0701	0.0721	64885	62774	65285	0.0993	0.0961	0.0998	0.8240	0.8223	0.8367
D045	DT	8.7612	8.6280	8.9014	0.0877	0.0863	0.0889	80686	79451	82064	0.1235	0.1214	0.1254	0.7296	0.7200	0.7391
D045	RF	6.3270	6.2118	6.4274	0.0631	0.0620	0.0641	57659	56803	58465	0.0883	0.0869	0.0896	0.8619	0.8578	0.8666
D045	GB	7.2341	7.1281	7.3348	0.0712	0.0701	0.0721	63316	62560	64094	0.0969	0.0958	0.0981	0.8335	0.8289	0.8389
D045	MLP	7.7085	7.5797	7.8116	0.0766	0.0753	0.0777	68566	67502	69509	0.1050	0.1032	0.1066	0.8046	0.7973	0.8118
D045	M5P	7.2078	7.0932	7.2899	0.0716	0.0705	0.0725	66262	63193	65681	0.1014	0.0967	0.1004	0.8137	0.8202	0.8349
D046	DT	8.7728	8.6539	8.8803	0.0877	0.0865	0.0888	80641	79373	81673	0.1235	0.1215	0.1251	0.7298	0.7238	0.7395

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D046	RF	6.3278	6.2130	6.4348	0.0631	0.0621	0.0642	57619	56601	58467	0.0882	0.0867	0.0895	0.8621	0.8585	0.8664
D046	GB	7.2075	7.0875	7.2870	0.0709	0.0698	0.0717	63107	62409	63842	0.0966	0.0955	0.0976	0.8346	0.8294	0.8401
D046	MLP	7.5921	7.4622	7.6915	0.0755	0.0742	0.0764	67670	66367	68533	0.1036	0.1015	0.1050	0.8097	0.8041	0.8173
D046	M5P	7.1584	7.0549	7.2561	0.0712	0.0702	0.0721	65124	62877	65532	0.0997	0.0961	0.1004	0.8228	0.8215	0.8364
D047	DT	8.7636	8.6548	8.8645	0.0877	0.0866	0.0888	80702	79763	81744	0.1236	0.1219	0.1250	0.7294	0.7216	0.7374
D047	RF	6.3196	6.2059	6.4030	0.0630	0.0621	0.0640	57608	56610	58428	0.0882	0.0866	0.0895	0.8621	0.8586	0.8665
D047	GB	7.2239	7.1090	7.3285	0.0711	0.0700	0.0720	63249	62511	64029	0.0968	0.0957	0.0979	0.8338	0.8292	0.8396
D047	MLP	7.7348	7.6019	7.8781	0.0768	0.0756	0.0781	68757	67585	69925	0.1053	0.1032	0.1065	0.8036	0.7960	0.8115
D047	M5P	7.1929	7.0485	7.2624	0.0714	0.0703	0.0724	67337	62963	65167	0.1031	0.0964	0.0999	0.8006	0.8223	0.8359
D048	DT	8.7763	8.6494	8.9187	0.0879	0.0866	0.0894	80650	79185	82060	0.1235	0.1213	0.1253	0.7297	0.7185	0.7384
D048	RF	6.3175	6.2018	6.4111	0.0630	0.0621	0.0641	57573	56545	58471	0.0881	0.0865	0.0894	0.8623	0.8584	0.8676
D048	GB	7.1999	7.0883	7.2782	0.0708	0.0697	0.0716	63047	62360	63718	0.0965	0.0954	0.0974	0.8349	0.8298	0.8405
D048	MLP	7.5425	7.3952	7.6581	0.0750	0.0735	0.0761	67397	66083	68445	0.1032	0.1010	0.1049	0.8113	0.8033	0.8201
D048	M5P	7.1344	7.0225	7.1999	0.0709	0.0699	0.0718	66077	62841	64867	0.1012	0.0961	0.0994	0.8127	0.8239	0.8369
D049	DT	8.7720	8.6597	8.8800	0.0878	0.0870	0.0889	80678	79727	81694	0.1235	0.1222	0.1249	0.7296	0.7222	0.7363
D049	RF	6.3284	6.2145	6.4238	0.0631	0.0620	0.0642	57610	56598	58348	0.0882	0.0866	0.0894	0.8621	0.8582	0.8669
D049	GB	7.2144	7.1027	7.2974	0.0710	0.0699	0.0717	63167	62442	63953	0.0967	0.0955	0.0977	0.8343	0.8297	0.8398
D049	MLP	7.5792	7.4297	7.7148	0.0753	0.0738	0.0765	67571	66217	68368	0.1034	0.1014	0.1047	0.8103	0.8020	0.8187
D049	M5P	7.1294	7.0204	7.2124	0.0709	0.0698	0.0719	65047	62779	65060	0.0996	0.0960	0.0998	0.8225	0.8231	0.8379
D050	DT	8.7041	8.6033	8.8144	0.0871	0.0862	0.0881	80281	79100	81305	0.1229	0.1212	0.1246	0.7323	0.7224	0.7417
D050	RF	6.2890	6.1834	6.3730	0.0627	0.0617	0.0636	57440	56602	58229	0.0879	0.0864	0.0892	0.8629	0.8592	0.8671
D050	GB	7.2152	7.1131	7.3195	0.0710	0.0699	0.0719	63141	62514	63903	0.0967	0.0956	0.0977	0.8344	0.8299	0.8399
D050	MLP	7.7161	7.5917	7.8663	0.0766	0.0755	0.0776	68246	67016	69062	0.1045	0.1024	0.1057	0.8065	0.8016	0.8128
D050	M5P	7.1890	7.0626	7.2701	0.0715	0.0704	0.0724	65887	63012	64622	0.1009	0.0964	0.0992	0.8156	0.8239	0.8352
D051	DT	8.7478	8.6317	8.8644	0.0876	0.0863	0.0889	80637	79375	82023	0.1234	0.1214	0.1256	0.7298	0.7203	0.7376
D051	RF	6.3120	6.2140	6.4098	0.0630	0.0620	0.0640	57586	56650	58483	0.0882	0.0866	0.0895	0.8622	0.8582	0.8668
D051	GB	7.2042	7.0905	7.2984	0.0709	0.0697	0.0718	63068	62415	63819	0.0966	0.0954	0.0975	0.8348	0.8295	0.8402
D051	MLP	7.6171	7.4945	7.7108	0.0757	0.0743	0.0767	67826	66496	68529	0.1038	0.1018	0.1051	0.8088	0.8017	0.8170
D051	M5P	7.1391	7.0380	7.2204	0.0710	0.0701	0.0717	64670	62736	65238	0.0990	0.0960	0.0997	0.8257	0.8222	0.8364
D052	DT	8.7311	8.5943	8.8590	0.0875	0.0860	0.0886	80667	79371	81626	0.1235	0.1216	0.1254	0.7297	0.7185	0.7378
D052	RF	6.3075	6.2168	6.3908	0.0629	0.0619	0.0638	57570	56720	58360	0.0881	0.0866	0.0894	0.8623	0.8583	0.8668
D052	GB	7.2106	7.1055	7.3098	0.0709	0.0698	0.0718	63113	62469	63852	0.0966	0.0957	0.0976	0.8345	0.8299	0.8399
D052	MLP	7.7287	7.6111	7.8458	0.0768	0.0757	0.0777	68612	67364	69357	0.1050	0.1031	0.1062	0.8044	0.7973	0.8124
D052	M5P	7.1906	7.0701	7.2612	0.0715	0.0705	0.0724	65780	63059	65275	0.1007	0.0965	0.0996	0.8172	0.8213	0.8350
D053	DT	8.7032	8.5736	8.7963	0.0871	0.0861	0.0881	80337	79041	81529	0.1230	0.1211	0.1248	0.7319	0.7215	0.7418
D053	RF	6.2939	6.1854	6.3895	0.0628	0.0618	0.0637	57458	56486	58201	0.0880	0.0863	0.0891	0.8628	0.8595	0.8677
D053	GB	7.2111	7.1080	7.3121	0.0709	0.0698	0.0719	63147	62463	63892	0.0967	0.0956	0.0977	0.8344	0.8297	0.8401
D053	MLP	7.6802	7.5261	7.7881	0.0763	0.0749	0.0777	68345	66827	69647	0.1046	0.1022	0.1061	0.8059	0.7980	0.8140

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D053	M5P	7.1819	7.0598	7.2607	0.0714	0.0702	0.0723	66061	63008	64584	0.1011	0.0965	0.0989	0.8135	0.8238	0.8351
D054	DT	8.7509	8.6370	8.8575	0.0876	0.0865	0.0885	80532	79292	81594	0.1233	0.1212	0.1249	0.7306	0.7221	0.7391
D054	RF	6.3174	6.2144	6.4126	0.0630	0.0620	0.0641	57620	56552	58403	0.0882	0.0866	0.0894	0.8621	0.8578	0.8666
D054	GB	7.2016	7.0884	7.2928	0.0709	0.0697	0.0717	63071	62408	63851	0.0966	0.0954	0.0975	0.8348	0.8295	0.8402
D054	MLP	7.6024	7.4925	7.7109	0.0756	0.0743	0.0765	67877	66681	68682	0.1039	0.1020	0.1054	0.8086	0.8015	0.8162
D054	M5P	7.1410	7.0382	7.2210	0.0711	0.0701	0.0718	64779	62758	65078	0.0992	0.0961	0.0994	0.8247	0.8232	0.8365
D055	DT	8.7295	8.6244	8.8456	0.0874	0.0864	0.0885	80532	79296	81609	0.1233	0.1214	0.1250	0.7306	0.7199	0.7388
D055	RF	6.3133	6.2115	6.4046	0.0630	0.0619	0.0640	57601	56679	58399	0.0882	0.0866	0.0894	0.8622	0.8584	0.8667
D055	GB	7.2081	7.1043	7.3044	0.0709	0.0698	0.0718	63130	62426	63864	0.0966	0.0956	0.0976	0.8345	0.8298	0.8401
D055	MLP	7.6604	7.5292	7.7720	0.0762	0.0747	0.0772	68337	67087	69725	0.1046	0.1027	0.1065	0.8059	0.7991	0.8151
D055	M5P	7.1899	7.0685	7.2728	0.0715	0.0703	0.0724	65959	63044	64927	0.1010	0.0967	0.0995	0.8151	0.8223	0.8353
D056	DT	8.7473	8.6397	8.8450	0.0876	0.0864	0.0886	80569	79498	81694	0.1233	0.1216	0.1254	0.7303	0.7215	0.7374
D056	RF	6.3183	6.2152	6.4215	0.0630	0.0620	0.0640	57613	56657	58421	0.0882	0.0866	0.0894	0.8621	0.8579	0.8668
D056	GB	7.2016	7.0884	7.2928	0.0709	0.0697	0.0717	63071	62408	63851	0.0966	0.0954	0.0975	0.8348	0.8295	0.8402
D056	MLP	7.6076	7.4990	7.7218	0.0756	0.0744	0.0766	67908	66553	69162	0.1040	0.1018	0.1058	0.8084	0.8014	0.8165
D056	M5P	7.1497	7.0443	7.2359	0.0711	0.0702	0.0719	65014	62831	65489	0.0995	0.0962	0.1001	0.8235	0.8216	0.8363
D057	DT	8.7599	8.6450	8.8466	0.0877	0.0866	0.0885	80843	79806	81796	0.1238	0.1221	0.1253	0.7285	0.7201	0.7367
D057	RF	6.3110	6.2065	6.3982	0.0629	0.0620	0.0638	57596	56632	58381	0.0882	0.0866	0.0893	0.8622	0.8582	0.8668
D057	GB	7.2057	7.0998	7.3045	0.0709	0.0698	0.0718	63114	62486	63837	0.0966	0.0956	0.0977	0.8345	0.8298	0.8403
D057	MLP	7.6175	7.4878	7.7095	0.0757	0.0747	0.0766	67906	66625	69018	0.1040	0.1019	0.1057	0.8084	0.8020	0.8163
D057	M5P	7.1644	7.0267	7.2284	0.0712	0.0700	0.0721	66737	62866	64737	0.1022	0.0962	0.0992	0.8058	0.8234	0.8357
D058	DT	8.7392	8.6017	8.8701	0.0875	0.0861	0.0892	80502	79070	81689	0.1232	0.1214	0.1253	0.7307	0.7223	0.7390
D058	RF	6.3155	6.2142	6.4232	0.0630	0.0621	0.0640	57600	56613	58384	0.0882	0.0865	0.0894	0.8622	0.8585	0.8674
D058	GB	7.1974	7.0818	7.2946	0.0708	0.0697	0.0717	63028	62314	63810	0.0965	0.0953	0.0975	0.8350	0.8300	0.8406
D058	MLP	7.5713	7.4212	7.6856	0.0753	0.0740	0.0765	67713	66303	68698	0.1037	0.1016	0.1053	0.8095	0.8034	0.8179
D058	M5P	7.1121	6.9935	7.1793	0.0708	0.0698	0.0717	65850	62658	64355	0.1008	0.0959	0.0986	0.8142	0.8256	0.8383
D059	DT	8.7780	8.6710	8.8474	0.0878	0.0868	0.0886	80725	79683	81562	0.1236	0.1221	0.1251	0.7293	0.7216	0.7350
D059	RF	6.3217	6.2068	6.4185	0.0630	0.0620	0.0641	57613	56638	58366	0.0882	0.0865	0.0895	0.8621	0.8579	0.8671
D059	GB	7.2062	7.1042	7.2998	0.0709	0.0699	0.0718	63109	62368	63832	0.0966	0.0955	0.0975	0.8346	0.8297	0.8398
D059	MLP	7.5916	7.4347	7.7159	0.0754	0.0740	0.0767	67841	66606	68631	0.1039	0.1018	0.1055	0.8088	0.8020	0.8166
D059	M5P	7.1270	7.0182	7.2025	0.0709	0.0698	0.0718	64926	62705	64818	0.0994	0.0960	0.0994	0.8233	0.8232	0.8375
D060	DT	8.7603	8.6511	8.8722	0.0877	0.0865	0.0889	80687	79492	81837	0.1235	0.1216	0.1253	0.7295	0.7207	0.7379
D060	RF	6.3116	6.2204	6.4075	0.0630	0.0621	0.0640	57587	56698	58411	0.0882	0.0867	0.0894	0.8622	0.8582	0.8668
D060	GB	7.2042	7.0907	7.2984	0.0709	0.0697	0.0718	63067	62415	63819	0.0966	0.0954	0.0975	0.8348	0.8295	0.8402
D060	MLP	7.6280	7.5036	7.7360	0.0758	0.0746	0.0769	67839	66387	69031	0.1039	0.1017	0.1052	0.8088	0.8013	0.8168
D060	M5P	7.1474	7.0516	7.2191	0.0711	0.0703	0.0720	64887	62751	65418	0.0993	0.0962	0.0999	0.8245	0.8219	0.8364
D061	DT	8.7391	8.5952	8.8590	0.0875	0.0864	0.0885	80653	79516	81769	0.1235	0.1217	0.1254	0.7298	0.7191	0.7356
D061	RF	6.3064	6.2098	6.3952	0.0629	0.0620	0.0637	57565	56595	58370	0.0881	0.0865	0.0893	0.8623	0.8583	0.8668

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D061	GB	7.2116	7.1076	7.3118	0.0709	0.0698	0.0718	63119	62506	63842	0.0966	0.0956	0.0976	0.8345	0.8298	0.8401
D061	MLP	7.7467	7.6252	7.8676	0.0768	0.0758	0.0778	68636	67370	69658	0.1051	0.1032	0.1066	0.8043	0.7966	0.8122
D061	M5P	7.1565	7.0235	7.2260	0.0711	0.0701	0.0720	66196	62828	64567	0.1013	0.0961	0.0989	0.8118	0.8237	0.8361
D062	DT	8.7523	8.6003	8.8672	0.0877	0.0862	0.0887	80644	79528	81908	0.1235	0.1219	0.1252	0.7298	0.7224	0.7377
D062	RF	6.3090	6.2154	6.4011	0.0629	0.0621	0.0640	57555	56544	58359	0.0881	0.0865	0.0894	0.8624	0.8585	0.8671
D062	GB	7.2045	7.1035	7.2951	0.0709	0.0698	0.0718	63056	62364	63745	0.0965	0.0955	0.0975	0.8348	0.8299	0.8400
D062	MLP	7.5800	7.4442	7.7088	0.0753	0.0740	0.0766	67477	65992	68540	0.1033	0.1012	0.1049	0.8108	0.8026	0.8188
D062	M5P	7.0993	6.9791	7.1596	0.0707	0.0697	0.0716	65468	62514	64289	0.1002	0.0958	0.0986	0.8179	0.8255	0.8389
D063	DT	8.7525	8.6289	8.8881	0.0876	0.0863	0.0889	80564	79371	81751	0.1233	0.1214	0.1255	0.7304	0.7189	0.7381
D063	RF	6.3161	6.2138	6.4070	0.0630	0.0621	0.0640	57581	56628	58362	0.0882	0.0865	0.0894	0.8623	0.8582	0.8671
D063	GB	7.2115	7.0977	7.3038	0.0709	0.0698	0.0717	63109	62484	63831	0.0966	0.0954	0.0976	0.8346	0.8303	0.8399
D063	MLP	7.6197	7.4883	7.7557	0.0756	0.0744	0.0768	67748	66320	68757	0.1037	0.1017	0.1053	0.8092	0.8005	0.8172
D063	M5P	7.1235	7.0125	7.1983	0.0709	0.0699	0.0716	64693	62657	65122	0.0990	0.0959	0.0995	0.8252	0.8225	0.8374
D064	DT	8.7099	8.6283	8.7849	0.0872	0.0862	0.0880	80435	79359	81073	0.1231	0.1212	0.1243	0.7312	0.7249	0.7394
D064	RF	6.2923	6.1872	6.3719	0.0627	0.0617	0.0637	57447	56583	58105	0.0879	0.0864	0.0891	0.8629	0.8598	0.8674
D064	GB	7.2150	7.1105	7.3102	0.0710	0.0699	0.0719	63174	62525	63899	0.0967	0.0956	0.0977	0.8342	0.8295	0.8398
D064	MLP	7.5935	7.4463	7.6939	0.0755	0.0743	0.0767	67661	66183	68493	0.1036	0.1011	0.1051	0.8098	0.8030	0.8175
D064	M5P	7.1539	7.0462	7.2399	0.0712	0.0700	0.0721	65746	62831	64454	0.1006	0.0961	0.0990	0.8163	0.8248	0.8363
D065	DT	8.7668	8.6512	8.9010	0.0878	0.0865	0.0890	80860	79587	82174	0.1238	0.1220	0.1261	0.7283	0.7199	0.7357
D065	RF	6.3158	6.2194	6.4114	0.0630	0.0621	0.0639	57603	56662	58373	0.0882	0.0867	0.0894	0.8621	0.8585	0.8669
D065	GB	7.2027	7.0909	7.2935	0.0709	0.0698	0.0717	63078	62417	63900	0.0966	0.0954	0.0975	0.8347	0.8298	0.8402
D065	MLP	7.5815	7.4390	7.6925	0.0754	0.0741	0.0767	67790	66403	69156	0.1038	0.1016	0.1058	0.8090	0.8007	0.8177
D065	M5P	7.1036	6.9901	7.1853	0.0707	0.0698	0.0715	64587	62550	65064	0.0989	0.0958	0.0993	0.8261	0.8230	0.8372
D066	DT	8.7452	8.6032	8.8908	0.0876	0.0862	0.0888	80544	79325	81815	0.1233	0.1215	0.1251	0.7305	0.7235	0.7388
D066	RF	6.3108	6.2135	6.3929	0.0629	0.0620	0.0638	57566	56707	58306	0.0881	0.0866	0.0893	0.8623	0.8587	0.8665
D066	GB	7.2129	7.1135	7.3143	0.0710	0.0698	0.0719	63158	62494	63898	0.0967	0.0956	0.0977	0.8343	0.8292	0.8398
D066	MLP	7.6139	7.4786	7.7297	0.0757	0.0743	0.0768	67902	66639	68979	0.1040	0.1020	0.1057	0.8084	0.8001	0.8162
D066	M5P	7.1609	7.0503	7.2362	0.0712	0.0701	0.0721	65696	62940	65069	0.1006	0.0964	0.0997	0.8181	0.8218	0.8357
D067	DT	8.7192	8.6044	8.8077	0.0873	0.0861	0.0881	80514	79053	81708	0.1233	0.1210	0.1253	0.7307	0.7204	0.7408
D067	RF	6.2969	6.1878	6.3802	0.0628	0.0618	0.0637	57463	56520	58165	0.0880	0.0863	0.0891	0.8628	0.8597	0.8674
D067	GB	7.2138	7.1167	7.3180	0.0710	0.0699	0.0719	63176	62489	63919	0.0967	0.0956	0.0979	0.8342	0.8295	0.8397
D067	MLP	7.6170	7.4892	7.7634	0.0757	0.0745	0.0772	67870	66548	68941	0.1039	0.1021	0.1053	0.8086	0.8023	0.8150
D067	M5P	7.1630	7.0410	7.2477	0.0713	0.0701	0.0722	65984	62974	64504	0.1010	0.0962	0.0988	0.8139	0.8240	0.8357
D068	DT	8.7793	8.6769	8.8685	0.0879	0.0870	0.0888	80831	80098	81828	0.1237	0.1223	0.1251	0.7286	0.7206	0.7352
D068	RF	6.3198	6.2145	6.4157	0.0630	0.0620	0.0641	57612	56595	58413	0.0882	0.0866	0.0894	0.8621	0.8586	0.8667
D068	GB	7.2040	7.0918	7.3016	0.0709	0.0697	0.0718	63091	62432	63847	0.0966	0.0955	0.0976	0.8347	0.8295	0.8404
D068	MLP	7.5530	7.4090	7.6876	0.0751	0.0738	0.0762	67539	66029	68556	0.1034	0.1015	0.1050	0.8105	0.8041	0.8188
D068	M5P	7.1140	7.0017	7.1974	0.0709	0.0700	0.0715	64577	62699	64778	0.0989	0.0960	0.0992	0.8263	0.8228	0.8363

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D069	DT	8.7457	8.6220	8.8543	0.0876	0.0862	0.0886	80584	79445	81548	0.1234	0.1215	0.1249	0.7302	0.7226	0.7399
D069	RF	6.3171	6.2115	6.4063	0.0630	0.0620	0.0639	57613	56621	58364	0.0882	0.0867	0.0893	0.8621	0.8582	0.8663
D069	GB	7.2114	7.1165	7.3101	0.0710	0.0699	0.0719	63158	62443	63929	0.0967	0.0956	0.0978	0.8343	0.8296	0.8400
D069	MLP	7.6193	7.4604	7.7686	0.0758	0.0743	0.0769	67917	66479	69090	0.1040	0.1016	0.1056	0.8083	0.8031	0.8170
D069	M5P	7.1735	7.0693	7.2517	0.0714	0.0701	0.0723	65945	62984	65172	0.1010	0.0965	0.0997	0.8154	0.8208	0.8353
D070	DT	8.7766	8.6751	8.8577	0.0878	0.0869	0.0887	80679	79772	81672	0.1235	0.1220	0.1251	0.7296	0.7217	0.7381
D070	RF	6.3235	6.2192	6.4200	0.0631	0.0620	0.0641	57636	56660	58432	0.0882	0.0867	0.0893	0.8620	0.8584	0.8669
D070	GB	7.2040	7.0918	7.3016	0.0709	0.0697	0.0718	63091	62432	63847	0.0966	0.0955	0.0976	0.8347	0.8295	0.8404
D070	MLP	7.5563	7.4427	7.6862	0.0752	0.0740	0.0762	67443	66257	68630	0.1033	0.1016	0.1048	0.8110	0.8042	0.8181
D070	M5P	7.1308	7.0191	7.2153	0.0710	0.0701	0.0718	65122	62757	65003	0.0997	0.0961	0.0996	0.8228	0.8229	0.8360
D071	DT	8.7655	8.6833	8.8457	0.0878	0.0869	0.0887	80747	79821	81741	0.1236	0.1218	0.1251	0.7291	0.7215	0.7394
D071	RF	6.3167	6.2065	6.4065	0.0630	0.0620	0.0639	57603	56629	58291	0.0882	0.0866	0.0893	0.8621	0.8584	0.8669
D071	GB	7.2093	7.1129	7.3058	0.0709	0.0698	0.0719	63139	62504	63914	0.0967	0.0955	0.0977	0.8344	0.8297	0.8397
D071	MLP	7.5451	7.4257	7.6353	0.0751	0.0737	0.0760	67413	65900	68461	0.1032	0.1010	0.1047	0.8112	0.8040	0.8200
D071	M5P	7.1444	7.0320	7.2058	0.0711	0.0699	0.0719	66677	62838	64577	0.1021	0.0962	0.0988	0.8059	0.8238	0.8368
D072	DT	8.7777	8.6636	8.8539	0.0879	0.0867	0.0891	80808	79551	82218	0.1237	0.1219	0.1259	0.7287	0.7160	0.7381
D072	RF	6.3204	6.2217	6.4129	0.0631	0.0621	0.0641	57634	56559	58385	0.0882	0.0868	0.0895	0.8620	0.8583	0.8667
D072	GB	7.1982	7.0903	7.2986	0.0708	0.0697	0.0717	63041	62354	63729	0.0965	0.0953	0.0975	0.8349	0.8299	0.8402
D072	MLP	7.5075	7.3943	7.6207	0.0747	0.0739	0.0757	67287	65873	68244	0.1030	0.1009	0.1044	0.8119	0.8051	0.8206
D072	M5P	7.1082	6.9914	7.1816	0.0708	0.0697	0.0716	65797	62607	64339	0.1007	0.0959	0.0987	0.8148	0.8257	0.8380
D073	DT	8.7880	8.7326	8.8873	0.0879	0.0872	0.0887	80764	79567	81788	0.1236	0.1219	0.1250	0.7291	0.7210	0.7355
D073	RF	6.3254	6.2196	6.4090	0.0631	0.0620	0.0641	57641	56585	58319	0.0882	0.0866	0.0894	0.8620	0.8588	0.8670
D073	GB	7.2092	7.1099	7.3034	0.0709	0.0699	0.0718	63127	62396	63831	0.0966	0.0955	0.0976	0.8345	0.8298	0.8395
D073	MLP	7.5312	7.4126	7.6558	0.0749	0.0738	0.0760	67410	66232	68558	0.1032	0.1013	0.1049	0.8112	0.8051	0.8196
D073	M5P	7.1055	6.9897	7.1848	0.0707	0.0698	0.0716	64828	62703	64971	0.0992	0.0959	0.0992	0.8242	0.8234	0.8371
D074	DT	8.7691	8.6156	8.8876	0.0878	0.0862	0.0889	80773	79647	82070	0.1237	0.1218	0.1259	0.7289	0.7196	0.7384
D074	RF	6.3169	6.2257	6.4055	0.0630	0.0621	0.0640	57608	56583	58471	0.0882	0.0866	0.0895	0.8621	0.8588	0.8672
D074	GB	7.2027	7.0909	7.2935	0.0709	0.0698	0.0717	63078	62417	63900	0.0966	0.0954	0.0975	0.8347	0.8298	0.8402
D074	MLP	7.5491	7.3947	7.6686	0.0751	0.0736	0.0760	67342	66114	68178	0.1031	0.1011	0.1047	0.8116	0.8054	0.8186
D074	M5P	7.1167	7.0094	7.2033	0.0708	0.0700	0.0717	65024	62600	65190	0.0995	0.0959	0.0994	0.8233	0.8232	0.8371
D075	DT	8.7607	8.6465	8.8800	0.0877	0.0868	0.0889	80756	79927	81929	0.1236	0.1221	0.1256	0.7291	0.7191	0.7363
D075	RF	6.3129	6.2198	6.3973	0.0630	0.0620	0.0638	57594	56701	58268	0.0882	0.0865	0.0893	0.8622	0.8587	0.8666
D075	GB	7.2114	7.1140	7.3083	0.0709	0.0699	0.0719	63151	62516	63918	0.0967	0.0956	0.0977	0.8343	0.8295	0.8395
D075	MLP	7.5605	7.4568	7.6813	0.0753	0.0740	0.0764	67697	66443	68558	0.1036	0.1018	0.1051	0.8096	0.8016	0.8171
D075	M5P	7.1306	7.0132	7.1979	0.0709	0.0698	0.0718	66106	62813	64423	0.1012	0.0960	0.0986	0.8123	0.8242	0.8373
D076	DT	8.7582	8.6258	8.8878	0.0877	0.0865	0.0890	80648	79181	81948	0.1235	0.1213	0.1255	0.7298	0.7205	0.7388
D076	RF	6.3163	6.2160	6.4038	0.0630	0.0621	0.0640	57593	56566	58346	0.0882	0.0865	0.0894	0.8622	0.8580	0.8666
D076	GB	7.1996	7.1011	7.2911	0.0708	0.0697	0.0717	63046	62380	63751	0.0965	0.0954	0.0975	0.8349	0.8303	0.8398

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D076	MLP	7.5442	7.4348	7.6654	0.0751	0.0739	0.0762	67562	66351	68580	0.1034	0.1015	0.1052	0.8103	0.8026	0.8190
D076	M5P	7.0933	6.9797	7.1552	0.0706	0.0696	0.0715	65497	62472	64285	0.1003	0.0957	0.0986	0.8176	0.8260	0.8388
D077	DT	8.7593	8.6491	8.8776	0.0876	0.0865	0.0888	80614	79279	81684	0.1234	0.1214	0.1253	0.7300	0.7218	0.7379
D077	RF	6.3209	6.2207	6.3973	0.0630	0.0620	0.0640	57606	56613	58235	0.0882	0.0864	0.0893	0.8621	0.8583	0.8669
D077	GB	7.2119	7.1118	7.3138	0.0709	0.0698	0.0719	63135	62477	63897	0.0967	0.0956	0.0977	0.8344	0.8297	0.8393
D077	MLP	7.5561	7.4293	7.7000	0.0752	0.0738	0.0764	67657	66308	68723	0.1036	0.1016	0.1052	0.8098	0.8016	0.8166
D077	M5P	7.0943	6.9821	7.1741	0.0706	0.0696	0.0713	64619	62528	64872	0.0989	0.0957	0.0990	0.8258	0.8239	0.8375
D078	DT	8.7780	8.6896	8.8730	0.0878	0.0869	0.0886	80762	79682	81860	0.1236	0.1221	0.1254	0.7290	0.7220	0.7353
D078	RF	6.3259	6.2145	6.4170	0.0631	0.0621	0.0640	57597	56679	58392	0.0882	0.0869	0.0895	0.8622	0.8588	0.8670
D078	GB	7.2138	7.1070	7.3050	0.0710	0.0699	0.0718	63146	62512	63908	0.0967	0.0955	0.0976	0.8344	0.8293	0.8399
D078	MLP	7.6066	7.4786	7.7301	0.0756	0.0743	0.0767	67680	66531	68591	0.1036	0.1019	0.1050	0.8097	0.8039	0.8162
D078	M5P	7.1908	7.0899	7.2779	0.0715	0.0704	0.0725	64696	63044	65679	0.0990	0.0966	0.1006	0.8259	0.8211	0.8348
D079	DT	8.7694	8.6530	8.8910	0.0877	0.0867	0.0889	80766	79711	82093	0.1237	0.1222	0.1254	0.7289	0.7188	0.7370
D079	RF	6.3432	6.2202	6.4225	0.0632	0.0622	0.0640	57756	56788	58542	0.0884	0.0870	0.0898	0.8614	0.8583	0.8660
D079	GB	7.2471	7.1472	7.3450	0.0713	0.0702	0.0722	63354	62691	64071	0.0970	0.0959	0.0980	0.8333	0.8290	0.8390
D079	MLP	7.6944	7.5561	7.8416	0.0763	0.0753	0.0775	68115	66947	68794	0.1043	0.1024	0.1055	0.8072	0.8018	0.8135
D079	M5P	7.2802	7.1392	7.3513	0.0722	0.0711	0.0732	66046	63528	65753	0.1011	0.0973	0.1007	0.8171	0.8194	0.8326
D080	DT	8.7754	8.6597	8.8883	0.0878	0.0866	0.0890	80684	79522	82127	0.1235	0.1216	0.1258	0.7295	0.7198	0.7392
D080	RF	6.3265	6.2198	6.4120	0.0631	0.0621	0.0640	57600	56556	58492	0.0882	0.0866	0.0894	0.8622	0.8585	0.8673
D080	GB	7.2076	7.1032	7.2885	0.0709	0.0698	0.0717	63063	62393	63735	0.0965	0.0955	0.0975	0.8348	0.8297	0.8402
D080	MLP	7.5575	7.4243	7.7066	0.0751	0.0739	0.0761	67237	66054	68025	0.1029	0.1011	0.1044	0.8121	0.8046	0.8185
D080	M5P	7.1779	7.0630	7.2325	0.0713	0.0702	0.0721	65479	62946	65075	0.1002	0.0964	0.0996	0.8195	0.8227	0.8361
D081	DT	8.7812	8.6801	8.8868	0.0879	0.0873	0.0890	80742	79856	81597	0.1236	0.1223	0.1250	0.7292	0.7207	0.7354
D081	RF	6.3311	6.2185	6.4314	0.0631	0.0620	0.0640	57606	56595	58375	0.0882	0.0866	0.0895	0.8621	0.8580	0.8672
D081	GB	7.2293	7.1219	7.3206	0.0711	0.0700	0.0719	63198	62601	63933	0.0968	0.0956	0.0977	0.8341	0.8297	0.8398
D081	MLP	7.6135	7.4879	7.7349	0.0755	0.0743	0.0766	67612	66225	68378	0.1035	0.1013	0.1050	0.8100	0.8032	0.8176
D081	M5P	7.1868	7.0717	7.2651	0.0714	0.0704	0.0723	64671	62932	65397	0.0990	0.0964	0.1002	0.8260	0.8213	0.8364
D082	DT	8.7546	8.6364	8.8452	0.0876	0.0865	0.0885	80454	79430	81556	0.1232	0.1216	0.1249	0.7311	0.7227	0.7365
D082	RF	6.3386	6.2216	6.4323	0.0632	0.0622	0.0640	57713	56768	58452	0.0884	0.0869	0.0896	0.8616	0.8581	0.8665
D082	GB	7.2470	7.1431	7.3498	0.0713	0.0702	0.0722	63361	62707	64129	0.0970	0.0958	0.0981	0.8332	0.8286	0.8388
D082	MLP	7.6533	7.5360	7.7992	0.0760	0.0750	0.0773	67906	66633	69083	0.1040	0.1021	0.1059	0.8084	0.8003	0.8170
D082	M5P	7.2823	7.1490	7.3596	0.0723	0.0713	0.0731	65746	63572	65737	0.1006	0.0976	0.1007	0.8194	0.8188	0.8313
D083	DT	8.8123	8.6969	8.9296	0.0882	0.0870	0.0896	80963	79856	82118	0.1239	0.1221	0.1259	0.7277	0.7205	0.7350
D083	RF	6.3380	6.2356	6.4228	0.0632	0.0623	0.0640	57697	56726	58441	0.0883	0.0869	0.0896	0.8617	0.8584	0.8661
D083	GB	7.2142	7.0995	7.3050	0.0710	0.0699	0.0718	63147	62512	63904	0.0967	0.0955	0.0976	0.8344	0.8293	0.8399
D083	MLP	7.6471	7.5199	7.7351	0.0759	0.0747	0.0768	68064	66652	68872	0.1042	0.1021	0.1055	0.8075	0.8006	0.8150
D083	M5P	7.1804	7.0756	7.2768	0.0714	0.0703	0.0723	64708	62888	65361	0.0991	0.0964	0.1000	0.8258	0.8210	0.8352
D084	DT	8.8118	8.7045	8.9145	0.0881	0.0871	0.0891	80976	79887	82055	0.1240	0.1224	0.1260	0.7276	0.7200	0.7357

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D084	RF	6.3463	6.2445	6.4441	0.0633	0.0622	0.0642	57761	56989	58618	0.0884	0.0870	0.0897	0.8614	0.8578	0.8656
D084	GB	7.2380	7.1402	7.3446	0.0712	0.0701	0.0721	63318	62664	64100	0.0969	0.0957	0.0979	0.8335	0.8286	0.8393
D084	MLP	7.7343	7.6015	7.8024	0.0768	0.0756	0.0777	68727	67350	69783	0.1052	0.1032	0.1068	0.8037	0.7959	0.8115
D084	M5P	7.2417	7.1246	7.3220	0.0720	0.0710	0.0727	65238	63424	65679	0.0999	0.0971	0.1005	0.8229	0.8187	0.8325
D085	DT	8.7609	8.6566	8.8543	0.0877	0.0867	0.0884	80562	79537	81421	0.1233	0.1218	0.1244	0.7304	0.7221	0.7368
D085	RF	6.3213	6.2023	6.4183	0.0630	0.0620	0.0640	57603	56693	58401	0.0882	0.0867	0.0894	0.8621	0.8590	0.8664
D085	GB	7.2347	7.1282	7.3310	0.0712	0.0702	0.0721	63313	62532	64030	0.0969	0.0958	0.0980	0.8335	0.8291	0.8391
D085	MLP	7.6969	7.5560	7.7884	0.0764	0.0750	0.0770	68390	66988	69590	0.1047	0.1027	0.1063	0.8056	0.7982	0.8146
D085	M5P	7.1806	7.0518	7.2502	0.0713	0.0702	0.0722	66343	62915	65133	0.1016	0.0965	0.0999	0.8114	0.8222	0.8350
D086	DT	8.8064	8.7246	8.8924	0.0881	0.0868	0.0890	80915	79520	82088	0.1239	0.1219	0.1259	0.7280	0.7194	0.7385
D086	RF	6.3406	6.2280	6.4386	0.0632	0.0622	0.0642	57724	56868	58603	0.0884	0.0868	0.0896	0.8616	0.8577	0.8663
D086	GB	7.2076	7.0849	7.2931	0.0709	0.0698	0.0717	63109	62475	63854	0.0966	0.0955	0.0976	0.8346	0.8293	0.8401
D086	MLP	7.6257	7.5005	7.7421	0.0758	0.0743	0.0768	68131	66750	69271	0.1043	0.1022	0.1061	0.8071	0.8001	0.8147
D086	M5P	7.1448	7.0309	7.2504	0.0711	0.0701	0.0720	64877	62732	65183	0.0993	0.0962	0.0999	0.8244	0.8220	0.8363
D087	DT	8.7891	8.6724	8.8956	0.0880	0.0869	0.0891	80790	79798	81932	0.1237	0.1221	0.1251	0.7288	0.7194	0.7383
D087	RF	6.3419	6.2270	6.4318	0.0632	0.0622	0.0642	57752	56937	58594	0.0884	0.0869	0.0896	0.8614	0.8578	0.8660
D087	GB	7.2374	7.1275	7.3366	0.0712	0.0702	0.0721	63333	62556	64099	0.0970	0.0958	0.0980	0.8334	0.8289	0.8389
D087	MLP	7.6822	7.5354	7.7752	0.0764	0.0751	0.0774	68563	67202	69648	0.1050	0.1027	0.1066	0.8047	0.7979	0.8122
D087	M5P	7.1861	7.0602	7.2608	0.0714	0.0703	0.0722	66212	63100	65340	0.1014	0.0966	0.1001	0.8147	0.8208	0.8343
D088	DT	8.8068	8.7513	8.8974	0.0881	0.0871	0.0892	80971	79805	82188	0.1240	0.1224	0.1259	0.7276	0.7202	0.7371
D088	RF	6.3391	6.2241	6.4375	0.0632	0.0623	0.0642	57704	56782	58532	0.0883	0.0868	0.0896	0.8617	0.8575	0.8662
D088	GB	7.2076	7.0849	7.2931	0.0709	0.0698	0.0717	63109	62475	63854	0.0966	0.0955	0.0976	0.8346	0.8293	0.8401
D088	MLP	7.6059	7.4883	7.6900	0.0756	0.0745	0.0765	67989	66678	68852	0.1041	0.1020	0.1056	0.8079	0.8003	0.8155
D088	M5P	7.1497	7.0284	7.2588	0.0711	0.0701	0.0720	65181	62800	65224	0.0998	0.0962	0.1000	0.8226	0.8218	0.8362
D089	DT	8.7954	8.6986	8.8796	0.0880	0.0872	0.0889	80979	80212	82041	0.1240	0.1224	0.1253	0.7276	0.7189	0.7343
D089	RF	6.3328	6.2189	6.4296	0.0631	0.0623	0.0641	57681	56769	58487	0.0883	0.0868	0.0896	0.8618	0.8582	0.8660
D089	GB	7.2265	7.1264	7.3189	0.0711	0.0701	0.0720	63267	62569	64029	0.0969	0.0957	0.0979	0.8337	0.8291	0.8392
D089	MLP	7.6342	7.4908	7.7252	0.0759	0.0746	0.0770	68146	66808	69393	0.1043	0.1023	0.1060	0.8070	0.7984	0.8155
D089	M5P	7.1839	7.0352	7.2438	0.0713	0.0702	0.0721	67435	62957	65221	0.1032	0.0964	0.0997	0.7995	0.8229	0.8354
D090	DT	8.7943	8.6729	8.9573	0.0881	0.0871	0.0897	80974	79990	82556	0.1240	0.1223	0.1265	0.7276	0.7178	0.7368
D090	RF	6.3342	6.2242	6.4350	0.0632	0.0622	0.0642	57686	56721	58541	0.0883	0.0867	0.0895	0.8617	0.8581	0.8668
D090	GB	7.2010	7.0839	7.2944	0.0708	0.0697	0.0717	63048	62304	63707	0.0965	0.0954	0.0975	0.8349	0.8300	0.8400
D090	MLP	7.5662	7.4520	7.6873	0.0753	0.0740	0.0765	67753	66432	68878	0.1037	0.1017	0.1054	0.8093	0.8025	0.8175
D090	M5P	7.1360	7.0135	7.2032	0.0710	0.0700	0.0718	66127	62949	64939	0.1012	0.0963	0.0994	0.8126	0.8240	0.8357
D091	DT	8.8078	8.6927	8.9314	0.0881	0.0870	0.0892	80894	79690	82212	0.1238	0.1221	0.1259	0.7282	0.7202	0.7359
D091	RF	6.3440	6.2255	6.4337	0.0633	0.0624	0.0643	57721	56850	58532	0.0884	0.0869	0.0896	0.8616	0.8581	0.8659
D091	GB	7.2173	7.1051	7.3066	0.0710	0.0700	0.0718	63185	62400	63913	0.0967	0.0955	0.0977	0.8342	0.8296	0.8396
D091	MLP	7.5736	7.4539	7.6548	0.0752	0.0741	0.0761	67659	66311	68389	0.1036	0.1014	0.1047	0.8098	0.8027	0.8185

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D091	M5P	7.1335	7.0101	7.2160	0.0710	0.0700	0.0719	65147	62778	64952	0.0997	0.0961	0.0996	0.8222	0.8225	0.8364
D092	DT	8.7159	8.5698	8.8227	0.0873	0.0859	0.0883	80376	79092	81582	0.1231	0.1209	0.1254	0.7316	0.7215	0.7392
D092	RF	6.3091	6.2071	6.3849	0.0629	0.0619	0.0638	57555	56724	58233	0.0881	0.0865	0.0893	0.8624	0.8587	0.8662
D092	GB	7.2157	7.1183	7.3193	0.0710	0.0699	0.0718	63152	62564	63889	0.0967	0.0956	0.0977	0.8343	0.8299	0.8397
D092	MLP	7.6353	7.4991	7.7342	0.0759	0.0745	0.0767	67937	66625	68774	0.1040	0.1022	0.1054	0.8082	0.8019	0.8158
D092	M5P	7.1442	7.0170	7.2191	0.0710	0.0699	0.0719	65796	62747	64896	0.1007	0.0959	0.0989	0.8159	0.8242	0.8364
D093	DT	8.7745	8.6673	8.8746	0.0879	0.0868	0.0890	80771	79704	81894	0.1237	0.1222	0.1257	0.7290	0.7210	0.7350
D093	RF	6.3215	6.2231	6.4100	0.0631	0.0622	0.0640	57651	56595	58528	0.0883	0.0866	0.0896	0.8619	0.8581	0.8665
D093	GB	7.2060	7.1044	7.2986	0.0709	0.0697	0.0718	63082	62389	63879	0.0966	0.0954	0.0976	0.8347	0.8295	0.8402
D093	MLP	7.6395	7.4999	7.7672	0.0759	0.0744	0.0773	68104	66926	69068	0.1043	0.1022	0.1058	0.8073	0.7992	0.8157
D093	M5P	7.1313	7.0213	7.2097	0.0710	0.0701	0.0717	64955	62668	65069	0.0994	0.0959	0.0994	0.8237	0.8214	0.8365
D094	DT	8.7475	8.6452	8.8868	0.0876	0.0860	0.0887	80517	78779	81702	0.1233	0.1207	0.1252	0.7307	0.7237	0.7390
D094	RF	6.3191	6.2210	6.4005	0.0630	0.0620	0.0639	57639	56717	58448	0.0882	0.0866	0.0893	0.8620	0.8578	0.8661
D094	GB	7.2121	7.1125	7.3144	0.0709	0.0698	0.0719	63135	62506	63876	0.0967	0.0957	0.0976	0.8344	0.8297	0.8401
D094	MLP	7.7403	7.6527	7.8497	0.0769	0.0758	0.0781	68716	67498	69973	0.1052	0.1034	0.1071	0.8038	0.7969	0.8108
D094	M5P	7.1484	7.0327	7.2321	0.0711	0.0701	0.0720	65748	62819	64954	0.1007	0.0961	0.0994	0.8174	0.8212	0.8351
D095	DT	8.7415	8.6633	8.7961	0.0875	0.0866	0.0880	80620	79601	81341	0.1234	0.1218	0.1244	0.7300	0.7248	0.7370
D095	RF	6.3124	6.1989	6.3943	0.0629	0.0621	0.0639	57579	56698	58355	0.0881	0.0866	0.0893	0.8623	0.8589	0.8666
D095	GB	7.2120	7.1087	7.3109	0.0709	0.0698	0.0719	63155	62426	63931	0.0967	0.0956	0.0977	0.8343	0.8296	0.8400
D095	MLP	7.5692	7.3966	7.6917	0.0752	0.0736	0.0764	67541	66300	68634	0.1034	0.1015	0.1054	0.8104	0.8022	0.8195
D095	M5P	7.1388	7.0112	7.2172	0.0710	0.0700	0.0719	65355	62810	64621	0.1001	0.0960	0.0989	0.8199	0.8245	0.8358
D096	DT	8.7733	8.6526	8.8839	0.0878	0.0866	0.0890	80709	79236	81977	0.1236	0.1215	0.1256	0.7294	0.7197	0.7384
D096	RF	6.3264	6.2311	6.4297	0.0631	0.0621	0.0641	57679	56721	58511	0.0883	0.0866	0.0895	0.8618	0.8577	0.8664
D096	GB	7.2011	7.0886	7.2944	0.0708	0.0697	0.0717	63065	62409	63834	0.0965	0.0954	0.0974	0.8348	0.8294	0.8403
D096	MLP	7.6065	7.4699	7.7186	0.0756	0.0743	0.0768	67941	66745	69079	0.1040	0.1021	0.1054	0.8082	0.8006	0.8153
D096	M5P	7.1313	7.0211	7.2133	0.0710	0.0700	0.0718	64693	62778	64903	0.0990	0.0960	0.0993	0.8254	0.8227	0.8364
D097	DT	8.7543	8.6227	8.8540	0.0877	0.0866	0.0886	80595	79598	81585	0.1234	0.1218	0.1250	0.7302	0.7236	0.7364
D097	RF	6.3260	6.2168	6.4157	0.0631	0.0622	0.0640	57683	56708	58461	0.0883	0.0867	0.0895	0.8618	0.8579	0.8663
D097	GB	7.2082	7.1033	7.3051	0.0709	0.0699	0.0718	63127	62442	63869	0.0966	0.0956	0.0976	0.8345	0.8299	0.8402
D097	MLP	7.6058	7.5264	7.7064	0.0756	0.0745	0.0767	68009	66824	69219	0.1041	0.1023	0.1061	0.8078	0.8013	0.8162
D097	M5P	7.1436	7.0359	7.2386	0.0711	0.0701	0.0720	64864	62964	65215	0.0993	0.0962	0.0996	0.8246	0.8214	0.8350
D098	DT	8.7905	8.6709	8.9019	0.0880	0.0870	0.0890	80949	79808	81886	0.1239	0.1221	0.1255	0.7278	0.7198	0.7353
D098	RF	6.3277	6.2303	6.4208	0.0631	0.0621	0.0641	57690	56686	58549	0.0883	0.0866	0.0895	0.8617	0.8575	0.8664
D098	GB	7.2011	7.0886	7.2944	0.0708	0.0697	0.0717	63066	62409	63834	0.0965	0.0954	0.0974	0.8348	0.8294	0.8403
D098	MLP	7.5954	7.4817	7.7000	0.0755	0.0745	0.0766	67948	66774	68905	0.1040	0.1022	0.1055	0.8082	0.8023	0.8154
D098	M5P	7.1319	7.0264	7.2119	0.0710	0.0700	0.0717	64826	62681	65315	0.0992	0.0960	0.0996	0.8247	0.8211	0.8365
D099	DT	8.7678	8.6609	8.8709	0.0878	0.0869	0.0888	80718	79841	81581	0.1236	0.1221	0.1253	0.7294	0.7235	0.7356
D099	RF	6.3247	6.2150	6.4103	0.0631	0.0622	0.0640	57674	56762	58484	0.0883	0.0867	0.0894	0.8618	0.8582	0.8664

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D099	GB	7.2060	7.1067	7.3048	0.0709	0.0698	0.0718	63114	62452	63829	0.0966	0.0955	0.0976	0.8345	0.8301	0.8400
D099	MLP	7.6005	7.4765	7.7067	0.0756	0.0744	0.0765	68011	66714	69253	0.1041	0.1024	0.1056	0.8078	0.8008	0.8143
D099	M5P	7.1180	7.0144	7.2084	0.0709	0.0699	0.0717	64165	62751	64986	0.0982	0.0961	0.0994	0.8289	0.8235	0.8360
D100	DT	8.7820	8.6586	8.8830	0.0880	0.0866	0.0893	80817	79903	82198	0.1237	0.1219	0.1257	0.7286	0.7205	0.7348
D100	RF	6.3276	6.2267	6.4215	0.0631	0.0622	0.0641	57688	56757	58476	0.0883	0.0867	0.0895	0.8617	0.8582	0.8669
D100	GB	7.1982	7.0841	7.2956	0.0708	0.0697	0.0717	63034	62324	63821	0.0965	0.0953	0.0975	0.8350	0.8300	0.8403
D100	MLP	7.5301	7.4027	7.6390	0.0749	0.0738	0.0760	67398	65962	68650	0.1032	0.1010	0.1048	0.8112	0.8038	0.8179
D100	M5P	7.1089	6.9982	7.1867	0.0708	0.0698	0.0717	65340	62629	64396	0.1000	0.0959	0.0989	0.8198	0.8255	0.8381
D101	DT	8.7912	8.6899	8.8461	0.0880	0.0870	0.0887	80898	79761	81804	0.1238	0.1222	0.1256	0.7282	0.7211	0.7342
D101	RF	6.3353	6.2282	6.4255	0.0632	0.0622	0.0642	57706	56817	58446	0.0883	0.0868	0.0896	0.8617	0.8580	0.8664
D101	GB	7.2063	7.1004	7.2938	0.0709	0.0698	0.0717	63110	62405	63867	0.0966	0.0955	0.0976	0.8346	0.8299	0.8398
D101	MLP	7.5717	7.4575	7.6638	0.0753	0.0741	0.0763	67692	66329	69053	0.1036	0.1017	0.1055	0.8096	0.8005	0.8180
D101	M5P	7.1244	6.9989	7.1941	0.0709	0.0698	0.0718	64941	62784	64860	0.0994	0.0959	0.0994	0.8233	0.8232	0.8357
D102	DT	8.7734	8.6670	8.8931	0.0879	0.0868	0.0889	80781	79580	82318	0.1237	0.1215	0.1260	0.7289	0.7193	0.7365
D102	RF	6.3223	6.2301	6.4143	0.0631	0.0621	0.0641	57658	56676	58497	0.0883	0.0866	0.0895	0.8619	0.8579	0.8664
D102	GB	7.2060	7.1044	7.2986	0.0709	0.0697	0.0718	63082	62389	63879	0.0966	0.0954	0.0976	0.8347	0.8295	0.8402
D102	MLP	7.6758	7.5402	7.7798	0.0763	0.0750	0.0773	68499	67221	69647	0.1049	0.1027	0.1061	0.8051	0.7978	0.8123
D102	M5P	7.1343	7.0234	7.2111	0.0710	0.0701	0.0717	65174	62703	65111	0.0998	0.0960	0.0994	0.8224	0.8215	0.8366
D103	DT	8.7559	8.6228	8.8677	0.0876	0.0865	0.0885	80609	79643	81277	0.1234	0.1218	0.1243	0.7301	0.7248	0.7381
D103	RF	6.3175	6.2115	6.4034	0.0630	0.0620	0.0638	57630	56684	58431	0.0882	0.0866	0.0895	0.8620	0.8587	0.8662
D103	GB	7.2130	7.1105	7.3099	0.0709	0.0698	0.0719	63139	62533	63886	0.0967	0.0956	0.0977	0.8344	0.8301	0.8398
D103	MLP	7.7667	7.6439	7.8532	0.0771	0.0758	0.0781	68957	67677	69886	0.1056	0.1033	0.1070	0.8024	0.7971	0.8094
D103	M5P	7.1306	7.0096	7.1986	0.0709	0.0700	0.0718	65987	62755	64839	0.1010	0.0960	0.0991	0.8144	0.8234	0.8368
D104	DT	8.7704	8.6081	8.9005	0.0879	0.0864	0.0892	80753	79587	81812	0.1236	0.1219	0.1251	0.7291	0.7213	0.7382
D104	RF	6.3219	6.2293	6.4087	0.0631	0.0623	0.0641	57645	56645	58427	0.0883	0.0866	0.0895	0.8619	0.8581	0.8665
D104	GB	7.2021	7.1060	7.2930	0.0708	0.0697	0.0717	63047	62382	63757	0.0965	0.0955	0.0974	0.8349	0.8299	0.8400
D104	MLP	7.6235	7.5131	7.7112	0.0757	0.0748	0.0766	68003	66718	68863	0.1041	0.1024	0.1056	0.8079	0.8009	0.8154
D104	M5P	7.1002	6.9781	7.1717	0.0707	0.0697	0.0716	65589	62552	64741	0.1004	0.0959	0.0990	0.8172	0.8253	0.8382
D105	DT	8.7635	8.6518	8.8765	0.0877	0.0868	0.0887	80705	79442	81657	0.1236	0.1215	0.1253	0.7295	0.7228	0.7375
D105	RF	6.3309	6.2272	6.4201	0.0631	0.0622	0.0642	57688	56781	58487	0.0883	0.0867	0.0896	0.8617	0.8578	0.8666
D105	GB	7.2115	7.1044	7.3075	0.0709	0.0698	0.0718	63118	62450	63825	0.0966	0.0956	0.0976	0.8345	0.8301	0.8399
D105	MLP	7.6232	7.4761	7.7420	0.0757	0.0741	0.0769	67937	66413	68876	0.1040	0.1018	0.1058	0.8082	0.8007	0.8168
D105	M5P	7.1225	6.9950	7.2000	0.0709	0.0699	0.0717	65028	62719	65059	0.0996	0.0960	0.0994	0.8228	0.8221	0.8363
D106	DT	8.7437	8.6335	8.8785	0.0875	0.0862	0.0885	80572	79216	81660	0.1234	0.1209	0.1254	0.7303	0.7213	0.7393
D106	RF	6.3099	6.2076	6.3896	0.0629	0.0619	0.0638	57548	56656	58244	0.0881	0.0864	0.0892	0.8624	0.8593	0.8664
D106	GB	7.2150	7.1164	7.3039	0.0710	0.0699	0.0718	63175	62522	63919	0.0967	0.0956	0.0977	0.8342	0.8295	0.8399
D106	MLP	7.6553	7.5280	7.7644	0.0761	0.0746	0.0775	68303	66857	69623	0.1046	0.1024	0.1063	0.8062	0.7982	0.8134
D106	M5P	7.1218	6.9955	7.2005	0.0709	0.0697	0.0718	65693	62634	64649	0.1006	0.0960	0.0987	0.8165	0.8245	0.8375

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D107	DT	8.7927	8.6793	8.9321	0.0880	0.0871	0.0892	80983	79988	82415	0.1240	0.1222	0.1260	0.7275	0.7195	0.7361
D107	RF	6.3295	6.2308	6.4141	0.0631	0.0623	0.0640	57698	56676	58527	0.0883	0.0868	0.0896	0.8617	0.8585	0.8665
D107	GB	7.2032	7.0921	7.2935	0.0709	0.0698	0.0717	63082	62417	63900	0.0966	0.0954	0.0975	0.8347	0.8298	0.8402
D107	MLP	7.6034	7.4268	7.7418	0.0757	0.0743	0.0770	68004	66913	69250	0.1041	0.1021	0.1057	0.8079	0.8005	0.8159
D107	M5P	7.1090	7.0027	7.1805	0.0708	0.0698	0.0716	64796	62613	64706	0.0992	0.0958	0.0991	0.8249	0.8236	0.8367
D108	DT	8.7639	8.6192	8.8894	0.0877	0.0862	0.0889	80628	79469	81563	0.1234	0.1214	0.1251	0.7299	0.7226	0.7365
D108	RF	6.3241	6.2159	6.4071	0.0631	0.0621	0.0640	57666	56724	58454	0.0883	0.0868	0.0894	0.8618	0.8584	0.8656
D108	GB	7.2125	7.1153	7.3114	0.0710	0.0699	0.0719	63160	62501	63871	0.0967	0.0956	0.0977	0.8343	0.8293	0.8399
D108	MLP	7.5873	7.4138	7.7408	0.0755	0.0741	0.0769	67810	66232	69142	0.1038	0.1013	0.1058	0.8089	0.8027	0.8173
D108	M5P	7.1341	7.0238	7.2172	0.0710	0.0700	0.0719	65871	62834	64882	0.1008	0.0962	0.0991	0.8166	0.8220	0.8360
D109	DT	8.7525	8.6485	8.8335	0.0876	0.0867	0.0884	80642	79402	81204	0.1235	0.1217	0.1243	0.7299	0.7235	0.7372
D109	RF	6.3133	6.2024	6.3895	0.0630	0.0620	0.0639	57576	56659	58236	0.0881	0.0866	0.0892	0.8623	0.8590	0.8664
D109	GB	7.2137	7.1157	7.3180	0.0710	0.0699	0.0720	63171	62503	63912	0.0967	0.0956	0.0979	0.8342	0.8298	0.8397
D109	MLP	7.6133	7.4345	7.7650	0.0757	0.0742	0.0773	68088	66582	69440	0.1042	0.1021	0.1062	0.8074	0.7983	0.8162
D109	M5P	7.1285	6.9975	7.2134	0.0710	0.0698	0.0719	65312	62733	64563	0.1000	0.0960	0.0987	0.8201	0.8242	0.8372
D110	DT	8.7999	8.7075	8.8779	0.0881	0.0872	0.0891	80862	79701	81991	0.1238	0.1223	0.1256	0.7284	0.7195	0.7350
D110	RF	6.3318	6.2262	6.4205	0.0632	0.0622	0.0640	57694	56732	58452	0.0883	0.0868	0.0895	0.8617	0.8581	0.8662
D110	GB	7.2045	7.0918	7.3016	0.0709	0.0697	0.0718	63090	62431	63849	0.0966	0.0955	0.0976	0.8347	0.8297	0.8404
D110	MLP	7.6233	7.4970	7.7260	0.0757	0.0745	0.0768	67805	66572	68901	0.1038	0.1019	0.1055	0.8090	0.8024	0.8166
D110	M5P	7.1167	7.0052	7.1881	0.0709	0.0700	0.0716	64576	62706	64611	0.0989	0.0959	0.0991	0.8264	0.8223	0.8357
D111	DT	8.7727	8.6589	8.8532	0.0879	0.0867	0.0889	80790	79399	82117	0.1237	0.1215	0.1255	0.7289	0.7221	0.7378
D111	RF	6.3283	6.2264	6.4166	0.0631	0.0621	0.0640	57697	56689	58434	0.0883	0.0868	0.0894	0.8617	0.8578	0.8662
D111	GB	7.2113	7.1138	7.3102	0.0710	0.0699	0.0720	63157	62467	63913	0.0967	0.0956	0.0978	0.8343	0.8297	0.8400
D111	MLP	7.6180	7.4690	7.7192	0.0757	0.0745	0.0766	67788	66466	68964	0.1038	0.1019	0.1057	0.8091	0.8011	0.8168
D111	M5P	7.1345	7.0258	7.2361	0.0710	0.0700	0.0719	64861	62939	65265	0.0993	0.0964	0.0997	0.8247	0.8222	0.8358
D112	DT	8.7948	8.7166	8.8668	0.0881	0.0873	0.0891	80914	79899	82140	0.1239	0.1222	0.1256	0.7280	0.7193	0.7351
D112	RF	6.3313	6.2275	6.4308	0.0631	0.0621	0.0642	57696	56713	58455	0.0883	0.0867	0.0894	0.8617	0.8578	0.8664
D112	GB	7.2045	7.0918	7.3016	0.0709	0.0697	0.0718	63089	62431	63849	0.0966	0.0955	0.0976	0.8347	0.8297	0.8404
D112	MLP	7.6119	7.4753	7.7228	0.0756	0.0743	0.0767	67790	66427	68963	0.1038	0.1018	0.1054	0.8090	0.8005	0.8169
D112	M5P	7.1242	7.0106	7.2031	0.0709	0.0700	0.0716	64961	62677	65060	0.0995	0.0960	0.0992	0.8239	0.8222	0.8356
D113	DT	8.7758	8.6715	8.8676	0.0879	0.0868	0.0888	80803	79957	81450	0.1237	0.1220	0.1253	0.7288	0.7226	0.7365
D113	RF	6.3285	6.2213	6.4098	0.0631	0.0621	0.0640	57698	56811	58396	0.0883	0.0870	0.0894	0.8617	0.8581	0.8658
D113	GB	7.2109	7.1120	7.3058	0.0709	0.0698	0.0719	63153	62451	63898	0.0967	0.0956	0.0977	0.8343	0.8297	0.8397
D113	MLP	7.6059	7.4677	7.7052	0.0756	0.0744	0.0767	67784	66492	68883	0.1038	0.1016	0.1054	0.8091	0.8023	0.8163
D113	M5P	7.1142	7.0180	7.2008	0.0709	0.0699	0.0717	64167	62858	64903	0.0982	0.0962	0.0992	0.8289	0.8236	0.8365
D114	DT	8.8064	8.6417	8.9309	0.0882	0.0866	0.0899	81058	79806	82302	0.1241	0.1222	0.1263	0.7270	0.7188	0.7362
D114	RF	6.3344	6.2288	6.4302	0.0632	0.0622	0.0642	57729	56786	58458	0.0884	0.0869	0.0896	0.8615	0.8577	0.8663
D114	GB	7.1984	7.0903	7.2992	0.0708	0.0697	0.0717	63040	62350	63745	0.0965	0.0953	0.0975	0.8349	0.8299	0.8402

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D114	MLP	7.5933	7.4589	7.6979	0.0754	0.0743	0.0766	67757	66554	69188	0.1037	0.1019	0.1055	0.8092	0.8003	0.8171
D114	M5P	7.1054	6.9789	7.1759	0.0708	0.0697	0.0716	65298	62622	64416	0.1000	0.0960	0.0987	0.8202	0.8256	0.8380
D115	DT	8.7999	8.6836	8.9017	0.0881	0.0870	0.0887	80913	80009	81845	0.1239	0.1227	0.1252	0.7281	0.7215	0.7352
D115	RF	6.3381	6.2335	6.4244	0.0632	0.0622	0.0642	57718	56672	58386	0.0884	0.0869	0.0895	0.8616	0.8582	0.8664
D115	GB	7.2100	7.1096	7.3011	0.0709	0.0699	0.0718	63134	62454	63832	0.0967	0.0955	0.0976	0.8344	0.8299	0.8395
D115	MLP	7.5938	7.4840	7.6830	0.0754	0.0744	0.0765	67731	66486	69084	0.1037	0.1017	0.1056	0.8094	0.8013	0.8178
D115	M5P	7.1089	7.0004	7.1883	0.0708	0.0698	0.0716	64739	62728	64946	0.0991	0.0960	0.0993	0.8246	0.8233	0.8366
D116	DT	8.7858	8.6620	8.9143	0.0880	0.0868	0.0892	80844	79437	82418	0.1238	0.1213	0.1261	0.7285	0.7196	0.7360
D116	RF	6.3271	6.2279	6.4194	0.0631	0.0622	0.0640	57675	56672	58503	0.0883	0.0867	0.0895	0.8618	0.8583	0.8664
D116	GB	7.2033	7.0921	7.2935	0.0709	0.0698	0.0717	63082	62417	63900	0.0966	0.0954	0.0975	0.8347	0.8298	0.8402
D116	MLP	7.5351	7.3709	7.6789	0.0750	0.0735	0.0762	67385	65753	68716	0.1032	0.1008	0.1050	0.8113	0.8029	0.8204
D116	M5P	7.1161	7.0028	7.2039	0.0708	0.0698	0.0716	65357	62640	64977	0.1001	0.0960	0.0990	0.8211	0.8229	0.8368
D117	DT	8.7885	8.6749	8.9075	0.0880	0.0869	0.0890	80960	79809	81805	0.1239	0.1223	0.1256	0.7277	0.7213	0.7344
D117	RF	6.3252	6.2246	6.4072	0.0631	0.0621	0.0639	57678	56765	58369	0.0883	0.0869	0.0894	0.8618	0.8586	0.8658
D117	GB	7.2125	7.1181	7.3050	0.0710	0.0699	0.0718	63159	62520	63888	0.0967	0.0956	0.0977	0.8343	0.8295	0.8396
D117	MLP	7.5473	7.4129	7.6645	0.0751	0.0742	0.0764	67486	66205	68602	0.1033	0.1011	0.1052	0.8108	0.8034	0.8184
D117	M5P	7.1215	7.0111	7.1819	0.0709	0.0699	0.0718	65948	62778	64621	0.1010	0.0961	0.0991	0.8148	0.8230	0.8372
D118	DT	8.7876	8.6736	8.8833	0.0880	0.0869	0.0891	80912	79848	82230	0.1239	0.1220	0.1257	0.7280	0.7200	0.7360
D118	RF	6.3287	6.2227	6.4175	0.0631	0.0622	0.0641	57686	56727	58385	0.0883	0.0867	0.0894	0.8618	0.8581	0.8667
D118	GB	7.2004	7.1011	7.2902	0.0708	0.0697	0.0717	63055	62418	63752	0.0965	0.0955	0.0975	0.8348	0.8302	0.8398
D118	MLP	7.5424	7.4098	7.6323	0.0751	0.0740	0.0759	67562	66019	68659	0.1034	0.1010	0.1048	0.8103	0.8035	0.8173
D118	M5P	7.0982	6.9706	7.1599	0.0707	0.0696	0.0716	65563	62547	64496	0.1004	0.0959	0.0989	0.8174	0.8255	0.8383
D119	DT	8.8002	8.6910	8.9062	0.0881	0.0868	0.0890	80977	79976	81883	0.1240	0.1222	0.1253	0.7276	0.7208	0.7360
D119	RF	6.3328	6.2261	6.4171	0.0632	0.0622	0.0642	57684	56747	58442	0.0883	0.0867	0.0895	0.8618	0.8582	0.8666
D119	GB	7.2120	7.1116	7.3117	0.0709	0.0698	0.0719	63138	62501	63935	0.0967	0.0955	0.0977	0.8344	0.8301	0.8395
D119	MLP	7.5443	7.4059	7.6736	0.0751	0.0738	0.0762	67542	66162	68737	0.1034	0.1011	0.1052	0.8104	0.8018	0.8186
D119	M5P	7.1035	6.9908	7.1864	0.0707	0.0697	0.0715	64918	62610	64963	0.0994	0.0959	0.0992	0.8236	0.8229	0.8371
D120	DT	8.8154	8.7291	8.8952	0.0882	0.0874	0.0892	80967	79863	82190	0.1240	0.1226	0.1260	0.7276	0.7190	0.7347
D120	RF	6.3399	6.2347	6.4216	0.0632	0.0622	0.0641	57701	56839	58477	0.0883	0.0870	0.0896	0.8617	0.8580	0.8665
D120	GB	7.2142	7.0997	7.3050	0.0710	0.0699	0.0718	63148	62512	63910	0.0967	0.0955	0.0976	0.8344	0.8293	0.8399
D120	MLP	7.6520	7.5077	7.8080	0.0760	0.0746	0.0775	68095	66633	69405	0.1042	0.1021	0.1061	0.8073	0.7992	0.8159
D120	M5P	7.1857	7.0772	7.2850	0.0714	0.0703	0.0724	64851	62993	65369	0.0993	0.0964	0.1001	0.8249	0.8212	0.8347
D121	DT	8.8205	8.6930	8.9555	0.0882	0.0870	0.0895	80993	79578	82621	0.1240	0.1220	0.1264	0.7274	0.7173	0.7357
D121	RF	6.3534	6.2361	6.4396	0.0633	0.0624	0.0641	57804	56885	58563	0.0885	0.0872	0.0897	0.8612	0.8579	0.8662
D121	GB	7.2480	7.1485	7.3521	0.0713	0.0702	0.0723	63367	62708	64131	0.0970	0.0959	0.0981	0.8332	0.8287	0.8389
D121	MLP	7.7583	7.6554	7.8365	0.0769	0.0761	0.0778	68721	67531	69888	0.1052	0.1036	0.1066	0.8037	0.7958	0.8105
D121	M5P	7.2679	7.1242	7.3327	0.0721	0.0711	0.0729	66242	63498	65521	0.1014	0.0973	0.1003	0.8153	0.8191	0.8323
D122	DT	8.8202	8.7054	8.9393	0.0883	0.0869	0.0895	80926	79645	82087	0.1239	0.1218	0.1261	0.7279	0.7198	0.7353

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D122	RF	6.3373	6.2277	6.4239	0.0632	0.0622	0.0641	57691	56694	58593	0.0883	0.0868	0.0897	0.8617	0.8581	0.8670
D122	GB	7.2084	7.1005	7.2886	0.0709	0.0698	0.0717	63077	62385	63712	0.0966	0.0955	0.0975	0.8347	0.8300	0.8401
D122	MLP	7.6072	7.4885	7.6734	0.0756	0.0744	0.0762	67745	66399	68685	0.1037	0.1016	0.1052	0.8093	0.8012	0.8181
D122	M5P	7.1734	7.0597	7.2359	0.0713	0.0702	0.0721	65539	62995	64986	0.1003	0.0966	0.0994	0.8191	0.8221	0.8358
D123	DT	8.8178	8.7183	8.9231	0.0882	0.0875	0.0890	80973	80279	81741	0.1240	0.1228	0.1253	0.7276	0.7212	0.7333
D123	RF	6.3475	6.2277	6.4412	0.0633	0.0622	0.0643	57721	56760	58433	0.0884	0.0868	0.0896	0.8616	0.8579	0.8670
D123	GB	7.2286	7.1296	7.3187	0.0711	0.0700	0.0718	63214	62597	63945	0.0968	0.0956	0.0978	0.8340	0.8296	0.8394
D123	MLP	7.6870	7.5358	7.7757	0.0762	0.0749	0.0773	68234	66718	69447	0.1045	0.1022	0.1060	0.8065	0.7987	0.8158
D123	M5P	7.1814	7.0739	7.2665	0.0714	0.0703	0.0722	64731	62988	65184	0.0991	0.0966	0.0999	0.8257	0.8212	0.8355
D124	DT	8.7958	8.6899	8.8953	0.0880	0.0872	0.0889	80872	79876	81786	0.1238	0.1225	0.1248	0.7283	0.7204	0.7347
D124	RF	6.3222	6.2082	6.4226	0.0630	0.0621	0.0640	57589	56685	58324	0.0882	0.0868	0.0894	0.8622	0.8587	0.8664
D124	GB	7.2238	7.1164	7.3294	0.0711	0.0701	0.0720	63229	62570	63985	0.0968	0.0956	0.0978	0.8339	0.8292	0.8393
D124	MLP	7.6111	7.4869	7.6887	0.0757	0.0745	0.0766	67805	66484	69063	0.1038	0.1019	0.1058	0.8089	0.7993	0.8186
D124	M5P	7.1496	7.0384	7.2346	0.0711	0.0700	0.0719	65375	62782	64786	0.1001	0.0961	0.0990	0.8198	0.8232	0.8366
D125	DT	8.8404	8.7252	8.9210	0.0884	0.0875	0.0894	81210	80150	82410	0.1243	0.1229	0.1263	0.7260	0.7188	0.7321
D125	RF	6.3406	6.2254	6.4292	0.0632	0.0624	0.0642	57715	56787	58451	0.0884	0.0869	0.0894	0.8616	0.8581	0.8665
D125	GB	7.2102	7.0850	7.3057	0.0709	0.0698	0.0718	63129	62486	63954	0.0966	0.0956	0.0976	0.8345	0.8295	0.8401
D125	MLP	7.5684	7.4571	7.6895	0.0753	0.0741	0.0764	67695	66227	69090	0.1036	0.1015	0.1060	0.8096	0.8019	0.8173
D125	M5P	7.1139	7.0071	7.2104	0.0708	0.0698	0.0718	64616	62544	64773	0.0989	0.0958	0.0993	0.8259	0.8229	0.8375
D126	DT	8.8112	8.6796	8.9055	0.0882	0.0873	0.0892	81044	79854	81895	0.1241	0.1225	0.1254	0.7271	0.7193	0.7348
D126	RF	6.3371	6.2226	6.4285	0.0632	0.0621	0.0641	57697	56778	58514	0.0883	0.0870	0.0895	0.8617	0.8584	0.8658
D126	GB	7.2229	7.1179	7.3171	0.0711	0.0701	0.0719	63231	62559	64019	0.0968	0.0957	0.0978	0.8339	0.8296	0.8395
D126	MLP	7.6442	7.5064	7.8133	0.0760	0.0747	0.0775	68074	66872	68833	0.1042	0.1022	0.1057	0.8075	0.8009	0.8142
D126	M5P	7.1597	7.0507	7.2403	0.0712	0.0702	0.0720	65484	62869	65039	0.1002	0.0963	0.0996	0.8200	0.8216	0.8357
D127	DT	8.7761	8.6274	8.8619	0.0878	0.0865	0.0889	80778	79321	82082	0.1237	0.1215	0.1255	0.7289	0.7181	0.7392
D127	RF	6.3221	6.2181	6.4060	0.0630	0.0620	0.0640	57587	56667	58318	0.0882	0.0867	0.0893	0.8622	0.8588	0.8664
D127	GB	7.2211	7.1195	7.3096	0.0710	0.0700	0.0719	63221	62548	63985	0.0968	0.0957	0.0978	0.8340	0.8296	0.8394
D127	MLP	7.6248	7.5063	7.7471	0.0758	0.0746	0.0769	68135	66678	69276	0.1043	0.1022	0.1061	0.8071	0.8017	0.8153
D127	M5P	7.1517	7.0235	7.2297	0.0711	0.0700	0.0720	65927	62775	64739	0.1009	0.0961	0.0992	0.8146	0.8235	0.8368
D128	DT	8.8276	8.7127	8.9433	0.0883	0.0871	0.0893	81015	79842	82116	0.1240	0.1220	0.1260	0.7273	0.7180	0.7373
D128	RF	6.3420	6.2351	6.4332	0.0632	0.0623	0.0642	57726	56806	58451	0.0884	0.0870	0.0894	0.8616	0.8581	0.8662
D128	GB	7.2086	7.0921	7.2919	0.0709	0.0698	0.0717	63120	62446	63897	0.0966	0.0955	0.0977	0.8345	0.8299	0.8394
D128	MLP	7.5619	7.4083	7.6698	0.0752	0.0741	0.0763	67726	66521	68790	0.1037	0.1019	0.1054	0.8094	0.8003	0.8173
D128	M5P	7.1197	6.9967	7.2207	0.0709	0.0700	0.0718	64856	62550	64631	0.0993	0.0959	0.0992	0.8245	0.8230	0.8366
D129	DT	8.7948	8.6454	8.9064	0.0880	0.0869	0.0889	80823	79970	81475	0.1237	0.1221	0.1249	0.7286	0.7213	0.7362
D129	RF	6.3387	6.2252	6.4313	0.0632	0.0622	0.0642	57714	56772	58498	0.0884	0.0869	0.0895	0.8616	0.8578	0.8657
D129	GB	7.2202	7.1193	7.3109	0.0710	0.0700	0.0719	63225	62572	64009	0.0968	0.0956	0.0978	0.8339	0.8294	0.8394
D129	MLP	7.5780	7.4140	7.7150	0.0754	0.0739	0.0766	67724	66238	69086	0.1037	0.1014	0.1059	0.8094	0.8020	0.8184

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D129	M5P	7.1664	7.0416	7.2379	0.0712	0.0702	0.0720	66285	62901	65309	0.1015	0.0963	0.0996	0.8128	0.8210	0.8359
D130	DT	8.8307	8.7019	8.9609	0.0884	0.0870	0.0896	81140	79874	82339	0.1242	0.1225	0.1264	0.7264	0.7171	0.7360
D130	RF	6.3422	6.2297	6.4354	0.0632	0.0623	0.0642	57724	56733	58533	0.0884	0.0869	0.0895	0.8616	0.8581	0.8660
D130	GB	7.2086	7.0921	7.2919	0.0709	0.0698	0.0717	63120	62446	63892	0.0966	0.0955	0.0977	0.8345	0.8299	0.8394
D130	MLP	7.5558	7.4262	7.6835	0.0752	0.0741	0.0763	67523	65973	68659	0.1034	0.1011	0.1051	0.8105	0.8051	0.8181
D130	M5P	7.1289	7.0109	7.2299	0.0709	0.0700	0.0718	65394	62667	64674	0.1001	0.0960	0.0992	0.8209	0.8232	0.8368
D131	DT	8.8100	8.6965	8.8936	0.0882	0.0873	0.0890	81178	80076	82020	0.1243	0.1224	0.1255	0.7262	0.7177	0.7344
D131	RF	6.3357	6.2243	6.4367	0.0632	0.0623	0.0640	57717	56879	58443	0.0884	0.0871	0.0895	0.8616	0.8575	0.8659
D131	GB	7.2181	7.1073	7.3093	0.0710	0.0700	0.0718	63199	62520	63998	0.0968	0.0956	0.0978	0.8341	0.8296	0.8393
D131	MLP	7.5628	7.4502	7.6507	0.0752	0.0741	0.0760	67581	66272	68510	0.1035	0.1018	0.1046	0.8102	0.8024	0.8180
D131	M5P	7.1561	7.0254	7.2232	0.0711	0.0700	0.0719	66855	62871	65077	0.1023	0.0963	0.0995	0.8058	0.8225	0.8364
D132	DT	8.8163	8.6874	8.9468	0.0882	0.0872	0.0895	81004	79981	82433	0.1240	0.1223	0.1259	0.7273	0.7182	0.7368
D132	RF	6.3375	6.2272	6.4303	0.0632	0.0623	0.0642	57711	56729	58517	0.0884	0.0868	0.0895	0.8616	0.8578	0.8663
D132	GB	7.1991	7.0872	7.2902	0.0708	0.0697	0.0716	63037	62294	63733	0.0965	0.0954	0.0975	0.8349	0.8302	0.8404
D132	MLP	7.5530	7.4490	7.6544	0.0752	0.0741	0.0762	67693	66596	68733	0.1036	0.1020	0.1052	0.8096	0.8025	0.8170
D132	M5P	7.1304	6.9984	7.2018	0.0709	0.0698	0.0719	66097	62733	64623	0.1012	0.0962	0.0990	0.8127	0.8245	0.8370
D133	DT	8.8222	8.7170	8.9089	0.0883	0.0873	0.0892	81050	80419	81846	0.1241	0.1228	0.1251	0.7271	0.7205	0.7335
D133	RF	6.3470	6.2268	6.4357	0.0633	0.0623	0.0643	57741	56794	58428	0.0884	0.0869	0.0896	0.8615	0.8583	0.8660
D133	GB	7.2126	7.1009	7.3006	0.0709	0.0700	0.0717	63153	62435	63882	0.0967	0.0954	0.0977	0.8343	0.8297	0.8397
D133	MLP	7.5355	7.4053	7.6618	0.0750	0.0738	0.0760	67497	66146	68692	0.1033	0.1011	0.1051	0.8107	0.8021	0.8183
D133	M5P	7.1252	6.9962	7.2031	0.0709	0.0699	0.0717	65051	62785	64908	0.0996	0.0961	0.0994	0.8229	0.8230	0.8368
D134	DT	8.8306	8.7268	8.9240	0.0884	0.0873	0.0892	81122	79848	82223	0.1242	0.1224	0.1258	0.7266	0.7188	0.7344
D134	RF	6.3412	6.2226	6.4257	0.0632	0.0623	0.0642	57723	56806	58368	0.0884	0.0870	0.0893	0.8616	0.8583	0.8666
D134	GB	7.2102	7.0850	7.3057	0.0709	0.0698	0.0718	63129	62486	63954	0.0966	0.0956	0.0976	0.8345	0.8295	0.8401
D134	MLP	7.6014	7.4699	7.7319	0.0755	0.0743	0.0767	67759	66525	68562	0.1037	0.1018	0.1051	0.8092	0.8019	0.8165
D134	M5P	7.1253	7.0153	7.2265	0.0709	0.0699	0.0719	65047	62628	64755	0.0996	0.0958	0.0994	0.8232	0.8231	0.8375
D135	DT	8.8411	8.7312	8.9342	0.0885	0.0874	0.0893	81321	80711	82210	0.1245	0.1232	0.1257	0.7253	0.7172	0.7326
D135	RF	6.3379	6.2139	6.4260	0.0632	0.0622	0.0641	57711	56851	58425	0.0884	0.0870	0.0895	0.8616	0.8585	0.8662
D135	GB	7.2241	7.1164	7.3294	0.0711	0.0701	0.0720	63232	62577	63985	0.0968	0.0956	0.0978	0.8339	0.8292	0.8394
D135	MLP	7.5916	7.4998	7.6680	0.0755	0.0743	0.0764	67808	66525	68983	0.1038	0.1020	0.1058	0.8089	0.8003	0.8156
D135	M5P	7.1420	7.0314	7.2206	0.0710	0.0699	0.0718	65614	62729	64860	0.1004	0.0962	0.0989	0.8181	0.8226	0.8367
D136	DT	8.8321	8.7229	8.9313	0.0884	0.0873	0.0894	81121	79958	82203	0.1242	0.1223	0.1259	0.7266	0.7193	0.7374
D136	RF	6.3388	6.2152	6.4225	0.0632	0.0623	0.0643	57702	56801	58409	0.0883	0.0870	0.0894	0.8617	0.8578	0.8661
D136	GB	7.2015	7.0974	7.2934	0.0709	0.0697	0.0717	63056	62397	63729	0.0965	0.0954	0.0975	0.8348	0.8301	0.8402
D136	MLP	7.5700	7.4547	7.7145	0.0753	0.0741	0.0762	67608	66399	68823	0.1035	0.1016	0.1055	0.8101	0.8041	0.8165
D136	M5P	7.1207	6.9941	7.2035	0.0708	0.0697	0.0719	65268	62736	64694	0.0999	0.0962	0.0989	0.8203	0.8247	0.8374
D137	DT	8.8400	8.7361	8.9391	0.0885	0.0876	0.0895	81354	80520	82121	0.1245	0.1233	0.1257	0.7250	0.7195	0.7322
D137	RF	6.3457	6.2317	6.4312	0.0633	0.0622	0.0643	57728	56789	58345	0.0884	0.0871	0.0895	0.8615	0.8581	0.8670

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D137	GB	7.2173	7.1245	7.3071	0.0710	0.0700	0.0718	63160	62441	63937	0.0967	0.0955	0.0978	0.8343	0.8298	0.8395
D137	MLP	7.6217	7.5021	7.7874	0.0757	0.0746	0.0773	68078	66772	69236	0.1042	0.1022	0.1061	0.8074	0.8005	0.8146
D137	M5P	7.1115	6.9925	7.1975	0.0708	0.0697	0.0715	64535	62677	64758	0.0988	0.0960	0.0993	0.8264	0.8236	0.8372
D138	DT	8.7359	8.6334	8.8664	0.0874	0.0861	0.0889	80562	79320	81866	0.1233	0.1213	0.1250	0.7304	0.7226	0.7375
D138	RF	6.3011	6.1895	6.3909	0.0628	0.0618	0.0638	57462	56581	58185	0.0880	0.0865	0.0891	0.8628	0.8595	0.8670
D138	GB	7.2251	7.1270	7.3228	0.0711	0.0701	0.0720	63236	62615	64004	0.0968	0.0956	0.0977	0.8339	0.8294	0.8396
D138	MLP	7.5603	7.4527	7.6448	0.0752	0.0743	0.0761	67430	66343	68702	0.1032	0.1014	0.1052	0.8111	0.8026	0.8172
D138	M5P	7.1780	7.0717	7.2700	0.0714	0.0701	0.0722	65500	62895	64604	0.1003	0.0963	0.0992	0.8190	0.8239	0.8361
D139	DT	8.8115	8.6971	8.9050	0.0882	0.0870	0.0893	81128	79987	82230	0.1242	0.1223	0.1259	0.7265	0.7202	0.7336
D139	RF	6.3303	6.2142	6.4237	0.0631	0.0622	0.0640	57643	56621	58406	0.0882	0.0868	0.0894	0.8620	0.8588	0.8668
D139	GB	7.2095	7.0846	7.3067	0.0709	0.0698	0.0718	63122	62486	63960	0.0966	0.0955	0.0976	0.8345	0.8294	0.8402
D139	MLP	7.5112	7.3822	7.5764	0.0748	0.0735	0.0756	67208	65860	68341	0.1029	0.1008	0.1048	0.8123	0.8050	0.8194
D139	M5P	7.1150	7.0146	7.2100	0.0708	0.0698	0.0718	64510	62505	64941	0.0988	0.0957	0.0995	0.8266	0.8238	0.8375
D140	DT	8.7616	8.6451	8.8542	0.0877	0.0867	0.0886	80724	79682	81705	0.1236	0.1217	0.1250	0.7293	0.7197	0.7382
D140	RF	6.3222	6.2046	6.4062	0.0630	0.0620	0.0639	57610	56743	58352	0.0882	0.0868	0.0894	0.8621	0.8587	0.8663
D140	GB	7.2222	7.1165	7.3169	0.0711	0.0700	0.0719	63225	62555	63967	0.0968	0.0956	0.0977	0.8340	0.8296	0.8395
D140	MLP	7.6464	7.5325	7.7253	0.0760	0.0749	0.0772	68152	66964	69131	0.1043	0.1026	0.1059	0.8070	0.8002	0.8147
D140	M5P	7.1818	7.0677	7.2643	0.0714	0.0703	0.0723	65442	62986	65408	0.1002	0.0965	0.0999	0.8205	0.8221	0.8350
D141	DT	8.7271	8.5755	8.8470	0.0874	0.0860	0.0886	80570	79239	81497	0.1233	0.1210	0.1248	0.7303	0.7207	0.7401
D141	RF	6.3036	6.1897	6.3882	0.0628	0.0618	0.0638	57479	56520	58240	0.0880	0.0866	0.0892	0.8627	0.8595	0.8670
D141	GB	7.2206	7.1105	7.3103	0.0710	0.0700	0.0719	63216	62547	63950	0.0968	0.0956	0.0978	0.8340	0.8300	0.8393
D141	MLP	7.5944	7.4446	7.6821	0.0755	0.0742	0.0766	67748	66523	68636	0.1037	0.1019	0.1053	0.8093	0.8015	0.8180
D141	M5P	7.1769	7.0610	7.2686	0.0714	0.0701	0.0723	66190	62904	64551	0.1013	0.0963	0.0992	0.8122	0.8239	0.8363
D142	DT	8.8126	8.6909	8.9040	0.0882	0.0871	0.0892	81018	79735	82236	0.1240	0.1220	0.1260	0.7273	0.7202	0.7370
D142	RF	6.3319	6.2195	6.4305	0.0631	0.0621	0.0641	57656	56602	58383	0.0883	0.0869	0.0893	0.8619	0.8587	0.8660
D142	GB	7.2073	7.0912	7.2919	0.0709	0.0698	0.0717	63109	62446	63929	0.0966	0.0955	0.0977	0.8346	0.8299	0.8396
D142	MLP	7.6259	7.5017	7.7290	0.0758	0.0745	0.0770	68060	66542	69331	0.1042	0.1018	0.1061	0.8076	0.8002	0.8158
D142	M5P	7.1213	7.0089	7.2286	0.0709	0.0700	0.0719	64780	62633	64897	0.0992	0.0959	0.0996	0.8250	0.8235	0.8369
D143	DT	8.7655	8.6357	8.8795	0.0877	0.0866	0.0886	80801	79859	81646	0.1237	0.1222	0.1247	0.7288	0.7212	0.7389
D143	RF	6.3234	6.2065	6.4122	0.0630	0.0620	0.0640	57624	56745	58423	0.0882	0.0868	0.0894	0.8620	0.8583	0.8662
D143	GB	7.2198	7.1138	7.3054	0.0710	0.0700	0.0718	63222	62533	63992	0.0968	0.0957	0.0978	0.8340	0.8295	0.8393
D143	MLP	7.6574	7.5475	7.7620	0.0761	0.0751	0.0771	68371	67076	69402	0.1047	0.1027	0.1061	0.8058	0.7984	0.8139
D143	M5P	7.1895	7.0689	7.2686	0.0714	0.0702	0.0724	66502	63025	65455	0.1018	0.0965	0.1002	0.8106	0.8212	0.8351
D144	DT	8.7911	8.6703	8.8957	0.0880	0.0866	0.0891	80896	79696	82252	0.1238	0.1220	0.1265	0.7281	0.7187	0.7380
D144	RF	6.3334	6.2166	6.4286	0.0632	0.0621	0.0641	57646	56682	58382	0.0883	0.0868	0.0893	0.8619	0.8588	0.8667
D144	GB	7.2073	7.0912	7.2919	0.0709	0.0698	0.0717	63109	62446	63929	0.0966	0.0955	0.0977	0.8346	0.8299	0.8396
D144	MLP	7.5528	7.4110	7.6541	0.0752	0.0738	0.0761	67715	66488	69075	0.1037	0.1017	0.1056	0.8095	0.8008	0.8187
D144	M5P	7.1386	7.0253	7.2305	0.0710	0.0701	0.0719	65370	62724	65276	0.1001	0.0961	0.1000	0.8212	0.8230	0.8369

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D145	DT	8.7829	8.6914	8.9034	0.0879	0.0872	0.0892	80890	80012	81797	0.1238	0.1220	0.1256	0.7282	0.7182	0.7360
D145	RF	6.3207	6.2126	6.4121	0.0630	0.0622	0.0640	57605	56682	58324	0.0882	0.0867	0.0894	0.8621	0.8582	0.8664
D145	GB	7.2195	7.1036	7.3161	0.0710	0.0700	0.0719	63206	62502	63956	0.0968	0.0956	0.0978	0.8340	0.8298	0.8393
D145	MLP	7.5854	7.4373	7.7023	0.0755	0.0741	0.0766	67857	66510	68757	0.1039	0.1020	0.1049	0.8087	0.8008	0.8165
D145	M5P	7.1610	7.0182	7.2301	0.0712	0.0700	0.0721	66992	62775	64609	0.1026	0.0962	0.0991	0.8030	0.8233	0.8369
D146	DT	8.8094	8.7165	8.9606	0.0882	0.0873	0.0896	81071	79716	82330	0.1241	0.1223	0.1257	0.7269	0.7138	0.7379
D146	RF	6.3236	6.2135	6.4122	0.0631	0.0621	0.0641	57613	56667	58415	0.0882	0.0867	0.0895	0.8621	0.8581	0.8670
D146	GB	7.1982	7.0872	7.2902	0.0708	0.0697	0.0716	63031	62296	63753	0.0965	0.0954	0.0975	0.8350	0.8299	0.8404
D146	MLP	7.5295	7.3802	7.6527	0.0749	0.0734	0.0762	67370	66167	68540	0.1031	0.1011	0.1050	0.8114	0.8044	0.8202
D146	M5P	7.1251	6.9958	7.1939	0.0709	0.0698	0.0717	66025	62721	64427	0.1011	0.0961	0.0988	0.8129	0.8248	0.8376
D147	DT	8.7883	8.6728	8.8909	0.0879	0.0867	0.0891	80743	79459	81956	0.1236	0.1219	0.1252	0.7292	0.7240	0.7352
D147	RF	6.3321	6.2177	6.4082	0.0631	0.0621	0.0641	57630	56562	58320	0.0882	0.0865	0.0894	0.8620	0.8590	0.8670
D147	GB	7.2120	7.1031	7.2982	0.0709	0.0700	0.0717	63147	62427	63890	0.0967	0.0954	0.0977	0.8344	0.8297	0.8397
D147	MLP	7.5785	7.4429	7.6964	0.0753	0.0740	0.0764	67741	66471	68908	0.1037	0.1019	0.1055	0.8093	0.8020	0.8170
D147	M5P	7.1180	6.9933	7.1989	0.0708	0.0698	0.0717	65011	62744	64855	0.0995	0.0960	0.0995	0.8231	0.8238	0.8371
D148	DT	8.8030	8.7026	8.8973	0.0881	0.0869	0.0890	81039	80016	81888	0.1241	0.1226	0.1255	0.7271	0.7192	0.7358
D148	RF	6.3291	6.2089	6.4247	0.0631	0.0622	0.0640	57640	56746	58378	0.0882	0.0867	0.0894	0.8620	0.8591	0.8666
D148	GB	7.2095	7.0846	7.3067	0.0709	0.0698	0.0718	63122	62486	63960	0.0966	0.0955	0.0976	0.8345	0.8294	0.8402
D148	MLP	7.5920	7.4203	7.7607	0.0755	0.0739	0.0769	67678	65877	68834	0.1036	0.1010	0.1053	0.8096	0.8015	0.8190
D148	M5P	7.1314	7.0278	7.2179	0.0710	0.0699	0.0719	64922	62681	65036	0.0994	0.0958	0.0997	0.8239	0.8238	0.8373
D149	DT	8.8161	8.6741	8.9147	0.0883	0.0870	0.0893	81203	80207	82303	0.1243	0.1230	0.1259	0.7260	0.7167	0.7343
D149	RF	6.3250	6.1923	6.4210	0.0631	0.0620	0.0639	57632	56807	58378	0.0882	0.0867	0.0894	0.8620	0.8588	0.8665
D149	GB	7.2251	7.1270	7.3228	0.0711	0.0701	0.0720	63236	62615	64003	0.0968	0.0956	0.0977	0.8339	0.8294	0.8396
D149	MLP	7.6364	7.4976	7.7728	0.0759	0.0745	0.0771	68068	66755	69036	0.1042	0.1022	0.1058	0.8074	0.8002	0.8159
D149	M5P	7.1526	7.0251	7.2275	0.0711	0.0699	0.0719	65819	62717	64545	0.1008	0.0961	0.0991	0.8157	0.8246	0.8368
D150	DT	8.7939	8.6907	8.8903	0.0880	0.0870	0.0891	80839	79728	82149	0.1238	0.1221	0.1258	0.7285	0.7189	0.7375
D150	RF	6.3241	6.2112	6.4122	0.0631	0.0621	0.0641	57608	56657	58301	0.0882	0.0867	0.0894	0.8621	0.8582	0.8672
D150	GB	7.1998	7.0972	7.2934	0.0708	0.0696	0.0717	63043	62374	63724	0.0965	0.0954	0.0975	0.8349	0.8301	0.8402
D150	MLP	7.5529	7.4195	7.6679	0.0751	0.0739	0.0761	67401	66183	68382	0.1032	0.1013	0.1048	0.8112	0.8031	0.8187
D150	M5P	7.1205	7.0021	7.1935	0.0708	0.0697	0.0717	65286	62685	64438	0.0999	0.0961	0.0988	0.8200	0.8247	0.8379
D151	DT	8.7895	8.6605	8.9037	0.0880	0.0867	0.0889	80890	79950	81830	0.1238	0.1223	0.1251	0.7282	0.7219	0.7350
D151	RF	6.3304	6.2165	6.4161	0.0631	0.0620	0.0641	57614	56635	58145	0.0882	0.0867	0.0892	0.8621	0.8587	0.8671
D151	GB	7.2176	7.1185	7.3103	0.0710	0.0700	0.0718	63166	62528	63921	0.0967	0.0955	0.0978	0.8343	0.8296	0.8394
D151	MLP	7.5259	7.4100	7.6047	0.0749	0.0737	0.0760	67283	65977	68469	0.1030	0.1013	0.1049	0.8118	0.8050	0.8191
D151	M5P	7.1083	6.9994	7.1931	0.0707	0.0697	0.0715	64415	62568	64851	0.0986	0.0958	0.0994	0.8272	0.8241	0.8372
D152	DT	9.0564	8.8980	9.1950	0.0907	0.0889	0.0920	82754	81179	84147	0.1267	0.1241	0.1292	0.7154	0.7038	0.7272
D152	RF	6.5054	6.4137	6.6019	0.0648	0.0638	0.0657	58897	58026	59680	0.0902	0.0887	0.0915	0.8559	0.8515	0.8614
D152	GB	7.4318	7.3361	7.5178	0.0730	0.0719	0.0737	64437	63725	65014	0.0986	0.0974	0.0995	0.8275	0.8231	0.8326

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D152	MLP	7.9965	7.8640	8.0915	0.0791	0.0779	0.0803	70155	68952	71465	0.1074	0.1055	0.1091	0.7955	0.7874	0.8025
D152	M5P	7.4804	7.3823	7.5714	0.0741	0.0730	0.0750	66598	64888	67222	0.1020	0.0993	0.1030	0.8155	0.8122	0.8246
D153	DT	9.6615	9.5556	9.7979	0.0965	0.0953	0.0976	87511	86277	88502	0.1340	0.1319	0.1354	0.6819	0.6730	0.6911
D153	RF	6.9403	6.8458	7.0259	0.0688	0.0679	0.0696	61718	60751	62520	0.0945	0.0931	0.0958	0.8417	0.8356	0.8478
D153	GB	8.2940	8.1887	8.3955	0.0810	0.0803	0.0817	70257	69531	70881	0.1076	0.1063	0.1086	0.7950	0.7905	0.8007
D153	MLP	9.3392	9.1597	9.5054	0.0918	0.0900	0.0934	78885	77295	80630	0.1208	0.1183	0.1234	0.7414	0.7313	0.7530
D153	M5P	8.7161	8.5842	8.8282	0.0856	0.0846	0.0867	75909	73394	75001	0.1162	0.1120	0.1148	0.7575	0.7638	0.7780
D154	DT	9.0384	8.9278	9.1369	0.0902	0.0892	0.0913	82210	80895	83288	0.1259	0.1237	0.1275	0.7193	0.7119	0.7252
D154	RF	6.5177	6.4097	6.6065	0.0649	0.0638	0.0658	58779	57695	59743	0.0900	0.0883	0.0914	0.8565	0.8514	0.8613
D154	GB	7.4402	7.3399	7.5304	0.0730	0.0719	0.0738	64470	63814	65069	0.0987	0.0975	0.0996	0.8274	0.8230	0.8322
D154	MLP	8.1407	8.0042	8.2785	0.0803	0.0792	0.0817	70866	69361	72254	0.1085	0.1060	0.1106	0.7913	0.7822	0.7999
D154	M5P	7.4925	7.3583	7.5752	0.0741	0.0731	0.0751	68259	64771	67004	0.1045	0.0989	0.1025	0.8021	0.8122	0.8251
D155	DT	9.5449	9.3971	9.6608	0.0952	0.0938	0.0960	86371	84958	87511	0.1322	0.1301	0.1340	0.6901	0.6784	0.6990
D155	RF	6.8594	6.7450	6.9573	0.0680	0.0668	0.0688	61142	59958	61799	0.0936	0.0917	0.0948	0.8447	0.8399	0.8502
D155	GB	7.9501	7.8683	8.0382	0.0776	0.0768	0.0784	67694	66837	68306	0.1036	0.1024	0.1045	0.8097	0.8056	0.8153
D155	MLP	8.8488	8.7275	8.9557	0.0869	0.0858	0.0880	75427	74026	76477	0.1155	0.1131	0.1171	0.7636	0.7557	0.7724
D155	M5P	8.2405	8.1429	8.3296	0.0810	0.0801	0.0818	71747	69873	71922	0.1098	0.1071	0.1101	0.7854	0.7839	0.7980
D156	DT	9.0116	8.9198	9.1134	0.0899	0.0892	0.0911	81848	80777	82735	0.1253	0.1241	0.1267	0.7217	0.7159	0.7285
D156	RF	6.5381	6.4369	6.6366	0.0650	0.0642	0.0660	58895	58131	59652	0.0902	0.0888	0.0913	0.8559	0.8517	0.8601
D156	GB	7.4595	7.3473	7.5627	0.0733	0.0723	0.0743	64667	63834	65385	0.0990	0.0974	0.1001	0.8263	0.8220	0.8318
D156	MLP	7.9873	7.8406	8.1512	0.0792	0.0779	0.0803	70181	68986	71772	0.1074	0.1056	0.1099	0.7953	0.7884	0.8032
D156	M5P	7.4997	7.3633	7.5767	0.0744	0.0734	0.0753	67595	65278	66906	0.1035	0.0996	0.1023	0.8075	0.8133	0.8253
D157	DT	8.8221	8.7263	8.9477	0.0883	0.0872	0.0893	80881	79800	81678	0.1238	0.1221	0.1252	0.7283	0.7232	0.7359
D157	RF	6.3900	6.2877	6.4756	0.0637	0.0628	0.0645	58036	57164	58695	0.0888	0.0874	0.0900	0.8601	0.8558	0.8646
D157	GB	7.2933	7.1718	7.3777	0.0717	0.0707	0.0727	63551	62902	64264	0.0973	0.0959	0.0983	0.8322	0.8274	0.8379
D157	MLP	7.6117	7.4620	7.7512	0.0756	0.0742	0.0767	67454	66520	68514	0.1033	0.1017	0.1047	0.8109	0.8030	0.8181
D157	M5P	7.2803	7.1715	7.3771	0.0723	0.0714	0.0733	65371	63661	65583	0.1001	0.0974	0.1005	0.8219	0.8189	0.8323
D158	DT	8.9543	8.8490	9.0632	0.0894	0.0884	0.0904	81577	80302	82703	0.1249	0.1230	0.1263	0.7236	0.7155	0.7318
D158	RF	6.4445	6.3355	6.5433	0.0642	0.0633	0.0652	58339	57526	59222	0.0893	0.0879	0.0907	0.8586	0.8538	0.8628
D158	GB	7.3791	7.2635	7.4766	0.0725	0.0714	0.0735	64138	63316	64928	0.0982	0.0970	0.0993	0.8291	0.8244	0.8345
D158	MLP	7.9663	7.7824	8.1422	0.0790	0.0774	0.0807	69997	68560	71496	0.1072	0.1050	0.1096	0.7964	0.7864	0.8050
D158	M5P	7.4025	7.2959	7.4820	0.0735	0.0726	0.0742	66194	64538	66781	0.1013	0.0988	0.1019	0.8176	0.8141	0.8266
D159	DT	8.7532	8.6558	8.8271	0.0875	0.0866	0.0884	80295	78919	81348	0.1229	0.1208	0.1248	0.7322	0.7238	0.7411
D159	RF	6.3587	6.2488	6.4407	0.0634	0.0625	0.0643	57773	56930	58501	0.0884	0.0869	0.0896	0.8613	0.8572	0.8660
D159	GB	7.3082	7.1928	7.4106	0.0719	0.0710	0.0728	63807	63013	64558	0.0977	0.0964	0.0989	0.8309	0.8270	0.8365
D159	MLP	7.6914	7.5562	7.7685	0.0764	0.0753	0.0774	68104	66869	69319	0.1043	0.1024	0.1061	0.8073	0.8009	0.8146
D159	M5P	7.2556	7.1222	7.3374	0.0720	0.0709	0.0728	67321	63294	65205	0.1031	0.0968	0.0999	0.8022	0.8228	0.8345
D160	DT	8.7882	8.6988	8.8938	0.0879	0.0869	0.0888	80681	79657	81688	0.1235	0.1222	0.1252	0.7296	0.7201	0.7355

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D160	RF	6.3655	6.2648	6.4387	0.0635	0.0625	0.0644	57848	56904	58622	0.0886	0.0870	0.0898	0.8610	0.8574	0.8656
D160	GB	7.2507	7.1330	7.3404	0.0713	0.0702	0.0722	63347	62593	64079	0.0970	0.0959	0.0979	0.8333	0.8282	0.8395
D160	MLP	7.6167	7.4677	7.6962	0.0757	0.0743	0.0766	67826	66899	68760	0.1038	0.1024	0.1053	0.8089	0.8038	0.8154
D160	M5P	7.1594	7.0614	7.2583	0.0712	0.0702	0.0722	64783	62850	64754	0.0992	0.0963	0.0993	0.8248	0.8233	0.8362
D161	DT	8.8235	8.7100	8.9240	0.0883	0.0870	0.0893	80827	79904	82024	0.1237	0.1222	0.1255	0.7286	0.7192	0.7368
D161	RF	6.3701	6.2609	6.4551	0.0635	0.0625	0.0644	57840	57070	58693	0.0885	0.0870	0.0899	0.8610	0.8567	0.8658
D161	GB	7.2915	7.1830	7.3898	0.0717	0.0708	0.0727	63646	62836	64483	0.0974	0.0963	0.0986	0.8317	0.8274	0.8376
D161	MLP	7.7282	7.5942	7.8402	0.0768	0.0756	0.0784	68637	67365	70100	0.1051	0.1033	0.1070	0.8042	0.7979	0.8127
D161	M5P	7.2171	7.1201	7.3062	0.0717	0.0706	0.0725	66055	63191	65374	0.1011	0.0967	0.1000	0.8161	0.8205	0.8353
D162	DT	8.7877	8.6792	8.9048	0.0879	0.0868	0.0889	80688	79624	81538	0.1235	0.1221	0.1247	0.7295	0.7202	0.7359
D162	RF	6.3662	6.2672	6.4506	0.0635	0.0625	0.0644	57852	56908	58644	0.0886	0.0870	0.0898	0.8610	0.8571	0.8656
D162	GB	7.2507	7.1330	7.3404	0.0713	0.0702	0.0722	63347	62593	64079	0.0970	0.0959	0.0979	0.8333	0.8282	0.8395
D162	MLP	7.6545	7.5349	7.7531	0.0761	0.0748	0.0773	68106	66617	69467	0.1043	0.1021	0.1060	0.8073	0.8008	0.8157
D162	M5P	7.1697	7.0711	7.2652	0.0713	0.0702	0.0722	65146	62970	64805	0.0997	0.0964	0.0995	0.8225	0.8219	0.8359
D163	DT	8.8158	8.6858	8.9209	0.0881	0.0870	0.0892	80753	79549	81799	0.1236	0.1219	0.1251	0.7291	0.7223	0.7376
D163	RF	6.3507	6.2480	6.4288	0.0633	0.0623	0.0641	57721	56745	58516	0.0884	0.0868	0.0896	0.8616	0.8582	0.8664
D163	GB	7.2921	7.1710	7.3912	0.0718	0.0708	0.0727	63676	62792	64472	0.0975	0.0963	0.0986	0.8316	0.8277	0.8367
D163	MLP	7.7695	7.6274	7.9006	0.0772	0.0757	0.0783	68719	67469	69994	0.1052	0.1032	0.1071	0.8037	0.7970	0.8103
D163	M5P	7.2641	7.1044	7.3330	0.0721	0.0710	0.0729	68485	63280	65263	0.1048	0.0968	0.1000	0.7876	0.8231	0.8346
D164	DT	8.7855	8.6718	8.9172	0.0879	0.0867	0.0893	80689	79405	82155	0.1235	0.1220	0.1255	0.7295	0.7185	0.7389
D164	RF	6.3384	6.2432	6.4220	0.0632	0.0623	0.0643	57697	56618	58502	0.0883	0.0866	0.0896	0.8617	0.8581	0.8664
D164	GB	7.2279	7.1109	7.3189	0.0711	0.0700	0.0720	63210	62445	63934	0.0968	0.0957	0.0978	0.8340	0.8296	0.8394
D164	MLP	7.5619	7.4333	7.6452	0.0752	0.0737	0.0762	67458	66296	68526	0.1033	0.1015	0.1050	0.8109	0.8040	0.8197
D164	M5P	7.1350	6.9959	7.2056	0.0709	0.0699	0.0718	66432	62754	64817	0.1017	0.0960	0.0990	0.8087	0.8247	0.8375
D165	DT	8.8055	8.6818	8.9090	0.0880	0.0869	0.0890	80647	79485	81646	0.1235	0.1217	0.1248	0.7299	0.7227	0.7367
D165	RF	6.3608	6.2502	6.4467	0.0634	0.0625	0.0643	57785	56872	58559	0.0885	0.0868	0.0897	0.8613	0.8571	0.8659
D165	GB	7.2659	7.1434	7.3474	0.0714	0.0703	0.0723	63464	62625	64159	0.0972	0.0960	0.0982	0.8327	0.8280	0.8387
D165	MLP	7.6699	7.5352	7.7726	0.0762	0.0749	0.0773	68111	66706	69369	0.1043	0.1023	0.1061	0.8072	0.8005	0.8143
D165	M5P	7.1766	7.0490	7.2707	0.0713	0.0704	0.0724	65451	62860	64894	0.1002	0.0962	0.0994	0.8191	0.8233	0.8369
D166	DT	8.7056	8.6029	8.8353	0.0871	0.0860	0.0883	80156	78995	81466	0.1227	0.1208	0.1248	0.7331	0.7252	0.7420
D166	RF	6.3171	6.2182	6.4074	0.0630	0.0619	0.0639	57629	56608	58308	0.0882	0.0867	0.0893	0.8620	0.8581	0.8661
D166	GB	7.2454	7.1408	7.3476	0.0713	0.0702	0.0721	63346	62720	64078	0.0970	0.0957	0.0980	0.8333	0.8288	0.8391
D166	MLP	7.7673	7.6024	7.8991	0.0770	0.0756	0.0783	68558	67583	69758	0.1050	0.1033	0.1069	0.8047	0.7972	0.8116
D166	M5P	7.1569	7.0337	7.2328	0.0711	0.0701	0.0719	65373	62994	64886	0.1001	0.0963	0.0993	0.8202	0.8251	0.8358
D167	DT	8.7564	8.6396	8.8583	0.0877	0.0865	0.0892	80638	79292	82276	0.1234	0.1216	0.1259	0.7298	0.7196	0.7368
D167	RF	6.3320	6.2205	6.4193	0.0632	0.0622	0.0640	57723	56613	58510	0.0884	0.0865	0.0896	0.8616	0.8576	0.8661
D167	GB	7.2397	7.1247	7.3350	0.0712	0.0701	0.0721	63265	62591	63981	0.0969	0.0955	0.0979	0.8337	0.8288	0.8396
D167	MLP	7.7059	7.5619	7.8222	0.0765	0.0752	0.0775	68244	67251	69248	0.1045	0.1028	0.1062	0.8065	0.8002	0.8128

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D167	M5P	7.1289	7.0107	7.2047	0.0709	0.0701	0.0717	64788	62752	64585	0.0992	0.0962	0.0989	0.8247	0.8228	0.8357
D168	DT	8.7615	8.6422	8.8724	0.0877	0.0865	0.0888	80687	79575	82008	0.1235	0.1217	0.1254	0.7295	0.7204	0.7389
D168	RF	6.3273	6.2137	6.4174	0.0631	0.0620	0.0640	57686	56678	58372	0.0883	0.0867	0.0894	0.8617	0.8577	0.8664
D168	GB	7.2436	7.1375	7.3402	0.0712	0.0703	0.0720	63334	62724	64085	0.0970	0.0957	0.0981	0.8334	0.8284	0.8390
D168	MLP	7.8599	7.6948	7.9755	0.0780	0.0764	0.0791	69458	68047	70708	0.1063	0.1041	0.1082	0.7995	0.7921	0.8081
D168	M5P	7.1509	7.0350	7.2317	0.0711	0.0700	0.0719	65141	62863	65050	0.0997	0.0964	0.0993	0.8224	0.8236	0.8352
D169	DT	8.7091	8.6245	8.7982	0.0871	0.0860	0.0882	80156	79052	81287	0.1227	0.1207	0.1243	0.7331	0.7247	0.7420
D169	RF	6.3129	6.1963	6.4024	0.0630	0.0619	0.0640	57574	56741	58440	0.0881	0.0866	0.0894	0.8623	0.8581	0.8669
D169	GB	7.2134	7.1069	7.3036	0.0710	0.0700	0.0718	63158	62394	63897	0.0967	0.0956	0.0978	0.8343	0.8295	0.8397
D169	MLP	7.6641	7.4906	7.7806	0.0761	0.0744	0.0772	68199	67083	69323	0.1044	0.1026	0.1058	0.8067	0.7982	0.8141
D169	M5P	7.1361	7.0100	7.2080	0.0710	0.0697	0.0719	65677	62757	64680	0.1005	0.0960	0.0990	0.8169	0.8257	0.8365
D170	DT	8.7429	8.6148	8.8554	0.0875	0.0864	0.0889	80444	79363	81637	0.1232	0.1216	0.1250	0.7312	0.7229	0.7398
D170	RF	6.3300	6.2338	6.4278	0.0631	0.0621	0.0642	57682	56609	58468	0.0883	0.0865	0.0895	0.8618	0.8579	0.8667
D170	GB	7.2049	7.0814	7.2930	0.0709	0.0698	0.0718	63080	62348	63771	0.0966	0.0954	0.0975	0.8347	0.8297	0.8402
D170	MLP	7.6065	7.4585	7.7039	0.0756	0.0743	0.0768	67993	66789	68967	0.1041	0.1021	0.1054	0.8079	0.8013	0.8154
D170	M5P	7.1195	7.0010	7.2100	0.0709	0.0699	0.0717	64670	62677	64802	0.0990	0.0959	0.0994	0.8256	0.8230	0.8362
D171	DT	8.7501	8.6476	8.8483	0.0876	0.0865	0.0887	80572	79135	81760	0.1233	0.1213	0.1251	0.7303	0.7214	0.7366
D171	RF	6.3243	6.2198	6.4137	0.0631	0.0620	0.0640	57666	56840	58516	0.0883	0.0868	0.0894	0.8618	0.8579	0.8667
D171	GB	7.2117	7.1063	7.2989	0.0710	0.0699	0.0718	63143	62350	63910	0.0967	0.0956	0.0977	0.8344	0.8301	0.8396
D171	MLP	7.6366	7.5111	7.7705	0.0759	0.0747	0.0770	68148	66966	69302	0.1043	0.1025	0.1062	0.8070	0.7994	0.8146
D171	M5P	7.1443	7.0229	7.2361	0.0710	0.0698	0.0719	65598	62805	65151	0.1004	0.0961	0.0992	0.8190	0.8243	0.8364
D172	DT	8.7460	8.6131	8.8499	0.0876	0.0863	0.0886	80479	79221	81561	0.1232	0.1213	0.1250	0.7310	0.7237	0.7389
D172	RF	6.3304	6.2269	6.4327	0.0632	0.0622	0.0642	57696	56709	58544	0.0883	0.0865	0.0895	0.8617	0.8577	0.8665
D172	GB	7.2049	7.0814	7.2930	0.0709	0.0698	0.0718	63080	62348	63771	0.0966	0.0954	0.0975	0.8347	0.8297	0.8402
D172	MLP	7.6118	7.4898	7.6949	0.0757	0.0744	0.0765	68007	66858	68743	0.1041	0.1025	0.1055	0.8078	0.8014	0.8146
D172	M5P	7.1224	7.0045	7.2037	0.0709	0.0699	0.0717	64868	62736	64749	0.0993	0.0961	0.0993	0.8245	0.8230	0.8362
D173	DT	8.7607	8.6453	8.8423	0.0877	0.0862	0.0889	80660	79468	81721	0.1235	0.1215	0.1252	0.7297	0.7220	0.7386
D173	RF	6.3205	6.2211	6.4010	0.0630	0.0619	0.0639	57616	56654	58515	0.0882	0.0866	0.0894	0.8621	0.8583	0.8666
D173	GB	7.2078	7.0977	7.2992	0.0709	0.0700	0.0718	63118	62370	63886	0.0966	0.0955	0.0977	0.8345	0.8298	0.8402
D173	MLP	7.6035	7.4900	7.6835	0.0756	0.0745	0.0767	68002	67046	68933	0.1041	0.1023	0.1055	0.8079	0.8022	0.8136
D173	M5P	7.1263	6.9946	7.2051	0.0708	0.0698	0.0717	66436	62628	65259	0.1017	0.0958	0.0993	0.8103	0.8238	0.8373
D174	DT	8.7811	8.6326	8.9002	0.0879	0.0864	0.0891	80698	79287	82059	0.1235	0.1214	0.1256	0.7294	0.7200	0.7381
D174	RF	6.3265	6.2241	6.4310	0.0631	0.0621	0.0642	57660	56561	58515	0.0883	0.0867	0.0895	0.8619	0.8578	0.8667
D174	GB	7.2020	7.0933	7.2949	0.0709	0.0697	0.0717	63064	62429	63794	0.0965	0.0955	0.0976	0.8348	0.8305	0.8402
D174	MLP	7.5409	7.4664	7.6379	0.0750	0.0740	0.0762	67541	66235	68428	0.1034	0.1015	0.1048	0.8105	0.8027	0.8179
D174	M5P	7.0973	6.9765	7.1721	0.0706	0.0697	0.0714	65741	62606	64748	0.1006	0.0957	0.0989	0.8159	0.8238	0.8374
D175	DT	8.7728	8.6556	8.8613	0.0878	0.0865	0.0887	80571	79332	81723	0.1233	0.1215	0.1250	0.7303	0.7227	0.7392
D175	RF	6.3344	6.2218	6.4251	0.0632	0.0621	0.0642	57687	56665	58479	0.0883	0.0866	0.0895	0.8617	0.8573	0.8670

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D175	GB	7.2108	7.1019	7.3016	0.0709	0.0699	0.0717	63125	62402	63843	0.0966	0.0954	0.0976	0.8345	0.8297	0.8402
D175	MLP	7.5846	7.4781	7.6875	0.0754	0.0741	0.0764	67783	66758	68669	0.1038	0.1020	0.1050	0.8091	0.8009	0.8159
D175	M5P	7.1126	6.9791	7.1844	0.0708	0.0697	0.0716	64883	62637	64782	0.0993	0.0958	0.0989	0.8236	0.8244	0.8369
D176	DT	8.7507	8.6174	8.8920	0.0876	0.0862	0.0890	80507	79163	81516	0.1232	0.1212	0.1252	0.7307	0.7223	0.7387
D176	RF	6.3317	6.2277	6.4271	0.0632	0.0621	0.0642	57722	56527	58527	0.0884	0.0863	0.0896	0.8616	0.8579	0.8660
D176	GB	7.2398	7.1247	7.3350	0.0712	0.0701	0.0721	63266	62591	63981	0.0969	0.0955	0.0979	0.8337	0.8288	0.8396
D176	MLP	7.7329	7.6220	7.8100	0.0767	0.0756	0.0777	68438	67241	69525	0.1048	0.1031	0.1065	0.8054	0.7981	0.8128
D176	M5P	7.1286	7.0093	7.2080	0.0709	0.0700	0.0718	64753	62777	65072	0.0991	0.0962	0.0994	0.8252	0.8226	0.8355
D177	DT	8.7635	8.6392	8.8743	0.0878	0.0865	0.0888	80621	79398	81668	0.1234	0.1214	0.1251	0.7300	0.7213	0.7383
D177	RF	6.3253	6.2221	6.4096	0.0631	0.0620	0.0640	57702	56658	58428	0.0883	0.0868	0.0896	0.8617	0.8578	0.8666
D177	GB	7.2415	7.1452	7.3431	0.0712	0.0701	0.0721	63321	62664	64041	0.0969	0.0956	0.0980	0.8334	0.8286	0.8391
D177	MLP	7.9088	7.7563	8.0366	0.0783	0.0766	0.0793	69515	68098	70476	0.1064	0.1041	0.1080	0.7991	0.7911	0.8065
D177	M5P	7.1253	6.9961	7.1935	0.0708	0.0698	0.0717	65580	62677	64953	0.1004	0.0961	0.0991	0.8182	0.8253	0.8363
D178	DT	8.7753	8.6380	8.9120	0.0878	0.0865	0.0890	80553	79407	81778	0.1233	0.1217	0.1252	0.7304	0.7226	0.7385
D178	RF	6.3310	6.2292	6.4256	0.0632	0.0621	0.0642	57717	56541	58587	0.0884	0.0866	0.0896	0.8616	0.8570	0.8653
D178	GB	7.2293	7.1233	7.3223	0.0711	0.0699	0.0720	63197	62501	63922	0.0968	0.0955	0.0977	0.8341	0.8293	0.8393
D178	MLP	7.7344	7.6085	7.8377	0.0766	0.0754	0.0777	68230	67210	69162	0.1045	0.1024	0.1059	0.8066	0.7999	0.8145
D178	M5P	7.1080	6.9862	7.1834	0.0708	0.0697	0.0715	65439	62600	64670	0.1002	0.0960	0.0988	0.8191	0.8246	0.8372
D179	DT	8.7609	8.6475	8.8795	0.0877	0.0863	0.0889	80565	79076	81800	0.1233	0.1211	0.1251	0.7303	0.7228	0.7392
D179	RF	6.3403	6.2337	6.4209	0.0632	0.0621	0.0642	57734	56555	58568	0.0884	0.0866	0.0897	0.8615	0.8577	0.8665
D179	GB	7.2519	7.1437	7.3501	0.0713	0.0702	0.0722	63365	62674	64065	0.0970	0.0956	0.0980	0.8332	0.8290	0.8386
D179	MLP	7.8558	7.6847	7.9598	0.0778	0.0763	0.0787	69075	67422	70565	0.1057	0.1033	0.1078	0.8017	0.7941	0.8108
D179	M5P	7.1171	7.0020	7.2026	0.0708	0.0698	0.0717	64735	62631	64655	0.0991	0.0958	0.0987	0.8247	0.8251	0.8369
D180	DT	8.7302	8.5900	8.8393	0.0874	0.0863	0.0886	80372	79532	81204	0.1230	0.1215	0.1244	0.7317	0.7240	0.7394
D180	RF	6.3061	6.2017	6.3847	0.0629	0.0618	0.0637	57520	56553	58197	0.0881	0.0865	0.0891	0.8625	0.8591	0.8671
D180	GB	7.2341	7.1417	7.3385	0.0711	0.0700	0.0720	63282	62593	64053	0.0969	0.0957	0.0979	0.8337	0.8290	0.8391
D180	MLP	7.6629	7.5033	7.7999	0.0762	0.0749	0.0774	68309	66664	69758	0.1046	0.1023	0.1067	0.8061	0.7987	0.8147
D180	M5P	7.1269	7.0131	7.2080	0.0709	0.0697	0.0719	65280	62711	64704	0.0999	0.0960	0.0990	0.8207	0.8238	0.8376
D181	DT	8.7706	8.6456	8.8823	0.0878	0.0865	0.0886	80719	79701	81570	0.1236	0.1220	0.1251	0.7293	0.7215	0.7375
D181	RF	6.3236	6.2325	6.4030	0.0631	0.0621	0.0640	57655	56764	58335	0.0883	0.0867	0.0894	0.8619	0.8582	0.8667
D181	GB	7.2302	7.1218	7.3304	0.0711	0.0700	0.0720	63225	62557	64019	0.0968	0.0956	0.0978	0.8340	0.8291	0.8389
D181	MLP	7.6146	7.4684	7.7291	0.0758	0.0743	0.0769	68050	66661	69121	0.1042	0.1022	0.1057	0.8076	0.8013	0.8149
D181	M5P	7.1029	7.0144	7.1937	0.0708	0.0698	0.0716	64673	62575	64665	0.0990	0.0959	0.0986	0.8254	0.8228	0.8373
D182	DT	8.7558	8.6498	8.8466	0.0877	0.0868	0.0886	80683	79809	81295	0.1235	0.1222	0.1246	0.7296	0.7226	0.7376
D182	RF	6.3182	6.2192	6.4020	0.0630	0.0619	0.0639	57605	56595	58380	0.0882	0.0867	0.0893	0.8621	0.8589	0.8666
D182	GB	7.2334	7.1359	7.3361	0.0711	0.0700	0.0721	63268	62576	64024	0.0969	0.0957	0.0979	0.8337	0.8288	0.8391
D182	MLP	7.6119	7.4991	7.7200	0.0758	0.0745	0.0768	68076	66805	69191	0.1042	0.1023	0.1059	0.8074	0.8016	0.8145
D182	M5P	7.1307	7.0274	7.2107	0.0710	0.0698	0.0719	65164	62725	65082	0.0998	0.0961	0.0998	0.8223	0.8211	0.8353

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D183	DT	8.7300	8.6169	8.7977	0.0874	0.0864	0.0880	80431	79229	81167	0.1231	0.1215	0.1244	0.7313	0.7224	0.7390
D183	RF	6.3046	6.1900	6.3956	0.0629	0.0618	0.0638	57501	56531	58292	0.0880	0.0865	0.0892	0.8626	0.8590	0.8669
D183	GB	7.2130	7.1169	7.3121	0.0710	0.0699	0.0719	63158	62490	63973	0.0967	0.0956	0.0977	0.8343	0.8299	0.8398
D183	MLP	7.6076	7.4652	7.7343	0.0757	0.0745	0.0770	67974	66699	69018	0.1041	0.1023	0.1056	0.8080	0.8012	0.8146
D183	M5P	7.1340	7.0216	7.2064	0.0710	0.0697	0.0720	65749	62855	64834	0.1007	0.0963	0.0989	0.8164	0.8221	0.8353
D184	DT	8.7895	8.6863	8.8841	0.0880	0.0873	0.0889	80912	79788	81854	0.1239	0.1220	0.1255	0.7280	0.7221	0.7343
D184	RF	6.3266	6.2311	6.4113	0.0631	0.0622	0.0641	57640	56668	58452	0.0882	0.0867	0.0894	0.8620	0.8580	0.8668
D184	GB	7.2068	7.0917	7.3008	0.0709	0.0698	0.0719	63095	62396	63899	0.0966	0.0954	0.0976	0.8346	0.8295	0.8403
D184	MLP	7.5805	7.4538	7.7058	0.0754	0.0741	0.0768	67693	66410	68752	0.1036	0.1018	0.1051	0.8096	0.8007	0.8180
D184	M5P	7.1102	7.0180	7.1847	0.0708	0.0699	0.0715	64480	62689	64664	0.0987	0.0961	0.0989	0.8269	0.8231	0.8365
D185	DT	8.7715	8.6406	8.8456	0.0879	0.0868	0.0886	80837	79778	81826	0.1238	0.1222	0.1251	0.7286	0.7197	0.7353
D185	RF	6.3189	6.2190	6.4007	0.0630	0.0619	0.0639	57605	56686	58371	0.0882	0.0867	0.0893	0.8621	0.8583	0.8665
D185	GB	7.2100	7.1089	7.3115	0.0709	0.0699	0.0719	63138	62482	63903	0.0967	0.0955	0.0977	0.8344	0.8298	0.8400
D185	MLP	7.5453	7.4221	7.6624	0.0751	0.0739	0.0761	67542	66280	68565	0.1034	0.1016	0.1050	0.8105	0.8051	0.8180
D185	M5P	7.1425	7.0357	7.2242	0.0710	0.0700	0.0719	65901	62927	65273	0.1009	0.0962	0.0998	0.8171	0.8214	0.8350
D186	DT	8.7859	8.6796	8.8840	0.0880	0.0872	0.0889	80950	79855	82123	0.1239	0.1220	0.1260	0.7278	0.7205	0.7352
D186	RF	6.3280	6.2359	6.4222	0.0631	0.0621	0.0641	57653	56652	58374	0.0883	0.0867	0.0894	0.8619	0.8578	0.8669
D186	GB	7.2068	7.0917	7.3008	0.0709	0.0698	0.0719	63095	62396	63899	0.0966	0.0954	0.0976	0.8346	0.8295	0.8403
D186	MLP	7.5405	7.4157	7.6689	0.0750	0.0738	0.0763	67456	65946	68682	0.1033	0.1012	0.1046	0.8109	0.8045	0.8185
D186	M5P	7.1173	7.0261	7.1969	0.0709	0.0699	0.0716	64938	62724	65057	0.0994	0.0960	0.0993	0.8240	0.8230	0.8363
D187	DT	8.7809	8.6734	8.8902	0.0879	0.0870	0.0891	80892	79948	81728	0.1238	0.1225	0.1250	0.7282	0.7216	0.7352
D187	RF	6.3182	6.2202	6.4040	0.0630	0.0620	0.0639	57621	56698	58395	0.0882	0.0868	0.0892	0.8621	0.8582	0.8665
D187	GB	7.2108	7.1119	7.3064	0.0709	0.0698	0.0718	63143	62506	63932	0.0967	0.0955	0.0977	0.8344	0.8298	0.8399
D187	MLP	7.5676	7.4670	7.7025	0.0753	0.0744	0.0765	67782	66621	69032	0.1038	0.1020	0.1059	0.8091	0.8019	0.8155
D187	M5P	7.1289	7.0274	7.2014	0.0709	0.0698	0.0719	66481	62807	65074	0.1018	0.0961	0.0996	0.8100	0.8223	0.8364
D188	DT	8.7895	8.6529	8.8929	0.0880	0.0867	0.0892	80952	79477	82404	0.1239	0.1216	0.1261	0.7277	0.7210	0.7377
D188	RF	6.3281	6.2356	6.4206	0.0631	0.0621	0.0642	57694	56672	58451	0.0883	0.0867	0.0895	0.8617	0.8582	0.8662
D188	GB	7.1999	7.0953	7.2942	0.0708	0.0698	0.0718	63047	62329	63793	0.0965	0.0953	0.0975	0.8349	0.8298	0.8405
D188	MLP	7.5619	7.4385	7.6670	0.0752	0.0742	0.0762	67544	66410	68581	0.1034	0.1017	0.1049	0.8104	0.8030	0.8192
D188	M5P	7.1070	7.0017	7.1660	0.0707	0.0697	0.0716	65791	62733	64791	0.1007	0.0962	0.0989	0.8156	0.8239	0.8375
D189	DT	8.7852	8.6989	8.8518	0.0879	0.0869	0.0885	80840	79664	81662	0.1238	0.1222	0.1251	0.7285	0.7229	0.7346
D189	RF	6.3315	6.2262	6.4123	0.0631	0.0621	0.0642	57655	56639	58372	0.0883	0.0869	0.0894	0.8619	0.8582	0.8664
D189	GB	7.2117	7.1194	7.3116	0.0709	0.0700	0.0718	63144	62432	63878	0.0967	0.0954	0.0976	0.8344	0.8294	0.8398
D189	MLP	7.5619	7.4196	7.6608	0.0752	0.0742	0.0765	67723	66521	68815	0.1037	0.1019	0.1051	0.8094	0.8025	0.8166
D189	M5P	7.1093	7.0040	7.1882	0.0708	0.0698	0.0715	64931	62686	64919	0.0994	0.0959	0.0992	0.8235	0.8228	0.8364
D190	DT	8.7848	8.6827	8.8806	0.0880	0.0870	0.0889	80891	79856	82015	0.1238	0.1222	0.1259	0.7282	0.7188	0.7371
D190	RF	6.3246	6.2244	6.4044	0.0631	0.0620	0.0641	57659	56631	58402	0.0883	0.0865	0.0894	0.8619	0.8585	0.8663
D190	GB	7.2302	7.1218	7.3304	0.0711	0.0700	0.0720	63225	62557	64019	0.0968	0.0956	0.0978	0.8339	0.8291	0.8388

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D190	MLP	7.5467	7.4035	7.6740	0.0752	0.0738	0.0766	67542	66298	68872	0.1034	0.1015	0.1052	0.8104	0.8036	0.8186
D190	M5P	7.1052	7.0117	7.1909	0.0708	0.0698	0.0715	64680	62549	64856	0.0990	0.0959	0.0993	0.8256	0.8222	0.8372
D191	DT	8.7742	8.6511	8.8872	0.0878	0.0868	0.0889	80725	79917	81511	0.1236	0.1228	0.1248	0.7293	0.7234	0.7358
D191	RF	6.3190	6.2089	6.4055	0.0630	0.0620	0.0638	57638	56673	58398	0.0882	0.0867	0.0894	0.8620	0.8582	0.8665
D191	GB	7.2303	7.1345	7.3371	0.0711	0.0701	0.0720	63259	62579	64017	0.0968	0.0957	0.0979	0.8338	0.8289	0.8390
D191	MLP	7.5953	7.4798	7.7381	0.0756	0.0744	0.0770	67825	66673	68999	0.1038	0.1021	0.1056	0.8089	0.8015	0.8161
D191	M5P	7.1122	7.0104	7.1760	0.0708	0.0698	0.0716	65593	62625	64880	0.1004	0.0960	0.0991	0.8182	0.8234	0.8368
D192	DT	8.7990	8.6745	8.8929	0.0881	0.0868	0.0891	80938	79869	81985	0.1239	0.1221	0.1259	0.7278	0.7182	0.7369
D192	RF	6.3265	6.2329	6.4074	0.0631	0.0622	0.0641	57686	56546	58454	0.0883	0.0867	0.0895	0.8618	0.8580	0.8663
D192	GB	7.2200	7.1138	7.3275	0.0710	0.0698	0.0719	63153	62410	63812	0.0967	0.0954	0.0976	0.8343	0.8296	0.8394
D192	MLP	7.5978	7.4851	7.7127	0.0756	0.0744	0.0768	67818	66365	68927	0.1038	0.1018	0.1056	0.8089	0.8024	0.8170
D192	M5P	7.0951	6.9835	7.1628	0.0707	0.0696	0.0715	65475	62418	64638	0.1002	0.0957	0.0988	0.8185	0.8259	0.8383
D193	DT	8.7715	8.6691	8.8692	0.0878	0.0868	0.0888	80663	79380	81913	0.1235	0.1214	0.1250	0.7297	0.7214	0.7383
D193	RF	6.3327	6.2323	6.4157	0.0631	0.0621	0.0641	57676	56680	58474	0.0883	0.0869	0.0895	0.8618	0.8581	0.8663
D193	GB	7.2315	7.1298	7.3366	0.0711	0.0701	0.0720	63240	62477	63982	0.0968	0.0955	0.0978	0.8339	0.8297	0.8393
D193	MLP	7.5513	7.4137	7.6898	0.0751	0.0738	0.0767	67472	66139	68712	0.1033	0.1013	0.1050	0.8108	0.8043	0.8188
D193	M5P	7.0946	6.9997	7.1767	0.0707	0.0696	0.0715	64759	62521	64707	0.0991	0.0958	0.0987	0.8246	0.8238	0.8375
D194	DT	8.8322	8.7217	8.9388	0.0884	0.0875	0.0895	80984	79973	81983	0.1240	0.1222	0.1256	0.7276	0.7203	0.7351
D194	RF	6.3914	6.2872	6.4819	0.0637	0.0627	0.0646	58048	57201	58728	0.0889	0.0874	0.0900	0.8600	0.8557	0.8640
D194	GB	7.2935	7.1718	7.3777	0.0717	0.0707	0.0727	63551	62902	64264	0.0973	0.0959	0.0983	0.8322	0.8274	0.8379
D194	MLP	7.8509	7.7055	7.9873	0.0778	0.0764	0.0792	69202	68140	70531	0.1059	0.1041	0.1077	0.8010	0.7935	0.8078
D194	M5P	7.2925	7.1903	7.3886	0.0724	0.0715	0.0733	65319	63777	65688	0.1000	0.0976	0.1008	0.8225	0.8175	0.8319
D195	DT	9.0413	8.9574	9.1382	0.0903	0.0893	0.0913	82369	81235	83509	0.1261	0.1245	0.1278	0.7182	0.7123	0.7239
D195	RF	6.4613	6.3499	6.5499	0.0643	0.0635	0.0652	58398	57597	59176	0.0894	0.0880	0.0905	0.8583	0.8538	0.8625
D195	GB	7.4157	7.3125	7.5240	0.0729	0.0719	0.0739	64395	63656	65117	0.0986	0.0972	0.0996	0.8277	0.8233	0.8335
D195	MLP	8.0830	7.8934	8.2647	0.0800	0.0781	0.0818	70784	69515	71977	0.1084	0.1065	0.1104	0.7918	0.7837	0.8013
D195	M5P	7.5068	7.3583	7.5755	0.0744	0.0733	0.0752	68324	65269	66980	0.1046	0.0996	0.1025	0.8007	0.8126	0.8247
D196	DT	8.9314	8.8211	9.0410	0.0892	0.0880	0.0902	81441	80297	82750	0.1247	0.1228	0.1265	0.7245	0.7163	0.7330
D196	RF	6.4188	6.3119	6.5159	0.0640	0.0629	0.0650	58192	57094	59020	0.0891	0.0872	0.0903	0.8593	0.8546	0.8637
D196	GB	7.3215	7.2120	7.4164	0.0719	0.0708	0.0728	63772	62989	64431	0.0976	0.0962	0.0986	0.8311	0.8263	0.8367
D196	MLP	7.6809	7.5488	7.7939	0.0762	0.0750	0.0774	67865	66916	69007	0.1039	0.1026	0.1058	0.8086	0.8011	0.8161
D196	M5P	7.2875	7.1760	7.3697	0.0723	0.0712	0.0731	66627	63469	65549	0.1020	0.0973	0.1006	0.8114	0.8198	0.8321
D197	DT	8.8935	8.8041	8.9911	0.0888	0.0880	0.0898	81151	79919	82253	0.1242	0.1227	0.1258	0.7265	0.7200	0.7333
D197	RF	6.4202	6.3027	6.5156	0.0640	0.0630	0.0649	58153	57293	58916	0.0890	0.0876	0.0903	0.8595	0.8549	0.8635
D197	GB	7.3287	7.2191	7.4169	0.0720	0.0709	0.0729	63783	63061	64463	0.0976	0.0962	0.0987	0.8310	0.8265	0.8367
D197	MLP	7.7256	7.6140	7.8431	0.0766	0.0755	0.0777	68110	67094	69084	0.1043	0.1030	0.1055	0.8072	0.7980	0.8136
D197	M5P	7.3214	7.2179	7.4186	0.0726	0.0716	0.0736	65664	63772	65957	0.1005	0.0978	0.1008	0.8200	0.8192	0.8320
D198	DT	8.8128	8.7095	8.9190	0.0881	0.0870	0.0891	80764	79339	82044	0.1236	0.1214	0.1259	0.7291	0.7212	0.7369

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D198	RF	6.3635	6.2428	6.4474	0.0633	0.0624	0.0644	57805	57024	58531	0.0885	0.0871	0.0895	0.8612	0.8562	0.8652
D198	GB	7.2646	7.1636	7.3674	0.0714	0.0703	0.0723	63479	62731	64161	0.0972	0.0958	0.0982	0.8326	0.8279	0.8377
D198	MLP	7.6881	7.5013	7.8515	0.0763	0.0748	0.0781	68175	66656	69759	0.1044	0.1022	0.1067	0.8068	0.7970	0.8157
D198	M5P	7.1821	7.0640	7.2800	0.0714	0.0702	0.0724	65421	62909	65071	0.1002	0.0964	0.0994	0.8203	0.8223	0.8363
D199	DT	8.8335	8.7069	8.9105	0.0884	0.0875	0.0893	81178	79835	82441	0.1243	0.1223	0.1264	0.7262	0.7176	0.7350
D199	RF	6.3522	6.2288	6.4398	0.0633	0.0623	0.0643	57765	56988	58327	0.0884	0.0871	0.0893	0.8614	0.8575	0.8658
D199	GB	7.2357	7.1177	7.3339	0.0712	0.0701	0.0720	63239	62512	63971	0.0968	0.0956	0.0978	0.8339	0.8290	0.8388
D199	MLP	7.6198	7.4806	7.7410	0.0757	0.0745	0.0769	67928	66911	69020	0.1040	0.1026	0.1056	0.8083	0.8019	0.8148
D199	M5P	7.1452	7.0482	7.2481	0.0711	0.0699	0.0721	64748	62688	64918	0.0991	0.0959	0.0993	0.8251	0.8236	0.8373
D200	DT	8.8225	8.7332	8.9203	0.0883	0.0876	0.0892	81035	80034	81930	0.1241	0.1227	0.1253	0.7273	0.7209	0.7340
D200	RF	6.3443	6.2195	6.4331	0.0632	0.0622	0.0642	57735	57024	58415	0.0884	0.0871	0.0895	0.8615	0.8568	0.8658
D200	GB	7.2519	7.1604	7.3610	0.0713	0.0703	0.0722	63394	62660	64177	0.0971	0.0958	0.0981	0.8331	0.8284	0.8385
D200	MLP	7.6671	7.5409	7.7733	0.0762	0.0748	0.0773	68246	66842	69173	0.1045	0.1025	0.1059	0.8065	0.7997	0.8131
D200	M5P	7.1932	7.0901	7.2965	0.0715	0.0703	0.0725	65371	63084	65309	0.1001	0.0966	0.0997	0.8212	0.8202	0.8346
D201	DT	8.7358	8.6300	8.8586	0.0874	0.0864	0.0886	80387	78920	81609	0.1231	0.1209	0.1252	0.7316	0.7214	0.7409
D201	RF	6.3185	6.2131	6.4035	0.0630	0.0619	0.0639	57539	56708	58343	0.0881	0.0867	0.0893	0.8624	0.8586	0.8670
D201	GB	7.2251	7.1202	7.3179	0.0711	0.0700	0.0719	63249	62544	63977	0.0968	0.0956	0.0979	0.8338	0.8292	0.8392
D201	MLP	7.6151	7.4616	7.7526	0.0757	0.0742	0.0771	68040	66539	69231	0.1042	0.1022	0.1056	0.8076	0.8024	0.8149
D201	M5P	7.1444	7.0174	7.2172	0.0710	0.0698	0.0720	65916	62598	64588	0.1009	0.0959	0.0992	0.8146	0.8236	0.8373
D202	DT	8.7976	8.6743	8.8965	0.0880	0.0873	0.0887	80882	79936	81847	0.1238	0.1220	0.1253	0.7282	0.7181	0.7359
D202	RF	6.3391	6.2324	6.4147	0.0632	0.0623	0.0641	57688	56813	58428	0.0883	0.0870	0.0893	0.8617	0.8582	0.8662
D202	GB	7.2109	7.0974	7.3062	0.0709	0.0700	0.0718	63130	62444	63948	0.0966	0.0955	0.0977	0.8344	0.8295	0.8399
D202	MLP	7.5819	7.5065	7.7019	0.0754	0.0742	0.0766	67861	66783	68733	0.1039	0.1024	0.1053	0.8087	0.8022	0.8162
D202	M5P	7.1296	7.0268	7.2325	0.0710	0.0698	0.0720	64842	62595	64879	0.0993	0.0959	0.0994	0.8242	0.8224	0.8373
D203	DT	8.7755	8.6301	8.9087	0.0878	0.0865	0.0889	80679	79350	81637	0.1235	0.1213	0.1250	0.7296	0.7209	0.7397
D203	RF	6.3313	6.2130	6.4144	0.0631	0.0620	0.0641	57638	56795	58439	0.0882	0.0868	0.0895	0.8620	0.8579	0.8664
D203	GB	7.2211	7.1159	7.3121	0.0710	0.0700	0.0720	63228	62540	63972	0.0968	0.0956	0.0979	0.8339	0.8295	0.8394
D203	MLP	7.6047	7.5090	7.7042	0.0756	0.0743	0.0766	67770	66539	68769	0.1038	0.1019	0.1053	0.8092	0.8022	0.8160
D203	M5P	7.1585	7.0277	7.2406	0.0712	0.0698	0.0721	66215	62713	65317	0.1014	0.0961	0.0999	0.8132	0.8215	0.8359
D204	DT	8.8125	8.7068	8.8895	0.0882	0.0872	0.0893	81053	79673	82218	0.1241	0.1221	0.1258	0.7271	0.7199	0.7365
D204	RF	6.3402	6.2333	6.4199	0.0632	0.0623	0.0642	57685	56863	58372	0.0883	0.0869	0.0893	0.8618	0.8583	0.8664
D204	GB	7.2109	7.0974	7.3062	0.0709	0.0700	0.0718	63130	62440	63948	0.0966	0.0955	0.0977	0.8344	0.8295	0.8399
D204	MLP	7.6189	7.4759	7.6943	0.0757	0.0743	0.0767	67964	66607	68766	0.1040	0.1021	0.1055	0.8081	0.8011	0.8164
D204	M5P	7.1326	7.0271	7.2304	0.0710	0.0699	0.0720	65067	62597	65230	0.0996	0.0960	0.0997	0.8228	0.8218	0.8373
D205	DT	8.7954	8.6736	8.9097	0.0880	0.0870	0.0891	80867	79908	81754	0.1238	0.1222	0.1254	0.7283	0.7218	0.7371
D205	RF	6.3256	6.2154	6.4037	0.0631	0.0621	0.0640	57636	56718	58404	0.0882	0.0867	0.0895	0.8620	0.8587	0.8661
D205	GB	7.2187	7.1079	7.3131	0.0710	0.0700	0.0719	63197	62481	63954	0.0968	0.0956	0.0978	0.8341	0.8297	0.8396
D205	MLP	7.6171	7.4835	7.7381	0.0757	0.0743	0.0769	68002	66614	68806	0.1041	0.1020	0.1053	0.8078	0.8017	0.8162

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D205	M5P	7.1471	7.0283	7.2249	0.0710	0.0698	0.0718	66741	62656	65060	0.1022	0.0961	0.0993	0.8068	0.8226	0.8369
D206	DT	8.8028	8.6874	8.9165	0.0881	0.0867	0.0892	80944	79454	81898	0.1239	0.1215	0.1254	0.7278	0.7187	0.7396
D206	RF	6.3307	6.2229	6.4117	0.0632	0.0622	0.0642	57680	56664	58467	0.0883	0.0866	0.0896	0.8618	0.8582	0.8665
D206	GB	7.2014	7.0990	7.2911	0.0709	0.0698	0.0717	63057	62361	63711	0.0965	0.0955	0.0974	0.8348	0.8301	0.8403
D206	MLP	7.5830	7.4591	7.6915	0.0754	0.0743	0.0765	67895	66662	68774	0.1039	0.1022	0.1053	0.8085	0.8018	0.8162
D206	M5P	7.1258	7.0089	7.1923	0.0709	0.0698	0.0718	66033	62592	64719	0.1011	0.0959	0.0991	0.8132	0.8248	0.8379
D207	DT	8.7964	8.7164	8.8539	0.0880	0.0874	0.0885	80874	79566	81829	0.1238	0.1221	0.1251	0.7283	0.7232	0.7350
D207	RF	6.3383	6.2334	6.4181	0.0632	0.0622	0.0641	57671	56747	58341	0.0883	0.0868	0.0893	0.8618	0.8583	0.8661
D207	GB	7.2169	7.1135	7.3112	0.0710	0.0701	0.0718	63186	62459	63904	0.0967	0.0956	0.0978	0.8342	0.8296	0.8396
D207	MLP	7.6028	7.4731	7.6919	0.0756	0.0742	0.0766	67972	66726	68953	0.1041	0.1019	0.1057	0.8080	0.8012	0.8164
D207	M5P	7.1243	7.0204	7.2065	0.0709	0.0697	0.0718	65196	62648	64784	0.0998	0.0960	0.0992	0.8211	0.8239	0.8373
D208	DT	8.8262	8.7130	8.8897	0.0883	0.0873	0.0891	81080	80172	82172	0.1241	0.1224	0.1256	0.7269	0.7207	0.7353
D208	RF	6.3534	6.2307	6.4390	0.0633	0.0624	0.0643	57783	56996	58351	0.0885	0.0871	0.0893	0.8613	0.8576	0.8655
D208	GB	7.2357	7.1177	7.3339	0.0712	0.0701	0.0720	63239	62512	63971	0.0968	0.0956	0.0978	0.8339	0.8290	0.8388
D208	MLP	7.6544	7.5204	7.7635	0.0761	0.0747	0.0775	68228	66808	69427	0.1045	0.1023	0.1063	0.8066	0.7995	0.8141
D208	M5P	7.1489	7.0491	7.2518	0.0711	0.0701	0.0721	64716	62651	65267	0.0991	0.0960	0.0996	0.8255	0.8213	0.8371
D209	DT	8.8329	8.7620	8.9277	0.0884	0.0874	0.0892	81087	80178	82127	0.1241	0.1228	0.1258	0.7269	0.7200	0.7341
D209	RF	6.3483	6.2406	6.4279	0.0633	0.0623	0.0642	57760	56999	58440	0.0884	0.0871	0.0895	0.8614	0.8567	0.8655
D209	GB	7.2446	7.1471	7.3466	0.0712	0.0702	0.0721	63335	62596	64081	0.0970	0.0957	0.0980	0.8334	0.8287	0.8386
D209	MLP	7.6319	7.5025	7.7242	0.0758	0.0746	0.0767	67752	66751	68672	0.1037	0.1023	0.1053	0.8093	0.8028	0.8159
D209	M5P	7.1694	7.0636	7.2616	0.0713	0.0700	0.0723	65728	62946	65107	0.1006	0.0964	0.0993	0.8178	0.8212	0.8358
D210	DT	8.8708	8.7235	9.0010	0.0887	0.0873	0.0901	81288	79812	82666	0.1244	0.1224	0.1266	0.7254	0.7143	0.7375
D210	RF	6.3704	6.2507	6.4568	0.0635	0.0625	0.0645	57904	56974	58482	0.0886	0.0872	0.0896	0.8607	0.8565	0.8649
D210	GB	7.2394	7.1404	7.3424	0.0712	0.0701	0.0722	63295	62552	63973	0.0969	0.0956	0.0979	0.8336	0.8290	0.8387
D210	MLP	7.6371	7.5138	7.7644	0.0758	0.0747	0.0772	67923	66669	69041	0.1040	0.1021	0.1056	0.8083	0.8015	0.8147
D210	M5P	7.1525	7.0359	7.2348	0.0711	0.0699	0.0722	65579	62820	64911	0.1004	0.0963	0.0991	0.8185	0.8237	0.8374
D211	DT	8.8375	8.7446	8.9140	0.0884	0.0874	0.0890	81094	79921	82081	0.1241	0.1226	0.1258	0.7269	0.7212	0.7323
D211	RF	6.3649	6.2534	6.4637	0.0634	0.0624	0.0645	57821	56917	58547	0.0885	0.0871	0.0894	0.8611	0.8571	0.8655
D211	GB	7.2410	7.1496	7.3318	0.0712	0.0702	0.0720	63297	62634	63968	0.0969	0.0956	0.0979	0.8336	0.8287	0.8389
D211	MLP	7.6388	7.5165	7.7597	0.0759	0.0746	0.0771	67984	66627	69063	0.1041	0.1019	0.1055	0.8079	0.8027	0.8151
D211	M5P	7.1428	7.0482	7.2423	0.0711	0.0699	0.0721	64849	62730	64983	0.0993	0.0961	0.0991	0.8243	0.8233	0.8372
D212	DT	8.7271	8.6017	8.8382	0.0873	0.0859	0.0884	80289	79107	81069	0.1229	0.1213	0.1243	0.7322	0.7238	0.7410
D212	RF	6.3606	6.2509	6.4364	0.0633	0.0623	0.0643	57840	57008	58520	0.0885	0.0871	0.0894	0.8610	0.8566	0.8650
D212	GB	7.2781	7.1822	7.3808	0.0716	0.0705	0.0725	63571	62807	64273	0.0973	0.0961	0.0983	0.8321	0.8274	0.8368
D212	MLP	7.7212	7.5771	7.8780	0.0767	0.0755	0.0780	68500	67068	69814	0.1049	0.1030	0.1062	0.8050	0.7967	0.8125
D212	M5P	7.2160	7.0946	7.3037	0.0717	0.0706	0.0725	65648	63090	65157	0.1005	0.0967	0.0996	0.8187	0.8218	0.8356
D213	DT	8.7799	8.6864	8.8906	0.0879	0.0870	0.0889	80940	79772	82160	0.1239	0.1218	0.1259	0.7278	0.7205	0.7345
D213	RF	6.3365	6.2314	6.4163	0.0632	0.0622	0.0640	57667	56744	58371	0.0883	0.0868	0.0894	0.8618	0.8581	0.8666

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D213	GB	7.2433	7.1329	7.3361	0.0712	0.0702	0.0721	63291	62541	64001	0.0969	0.0957	0.0978	0.8336	0.8287	0.8384
D213	MLP	7.5669	7.4009	7.7517	0.0753	0.0737	0.0770	67404	66103	68645	0.1032	0.1011	0.1050	0.8112	0.8029	0.8198
D213	M5P	7.1522	7.0427	7.2626	0.0711	0.0700	0.0721	64703	62672	64831	0.0991	0.0961	0.0993	0.8253	0.8241	0.8377
D214	DT	8.7702	8.6560	8.8733	0.0878	0.0870	0.0888	80738	79411	81858	0.1236	0.1218	0.1251	0.7292	0.7190	0.7387
D214	RF	6.3288	6.2134	6.4078	0.0631	0.0619	0.0639	57654	56751	58333	0.0883	0.0869	0.0893	0.8619	0.8577	0.8660
D214	GB	7.2596	7.1612	7.3713	0.0714	0.0704	0.0722	63443	62723	64110	0.0971	0.0959	0.0981	0.8328	0.8284	0.8377
D214	MLP	7.6140	7.4906	7.7205	0.0757	0.0745	0.0769	67705	66482	68772	0.1037	0.1018	0.1055	0.8095	0.8014	0.8171
D214	M5P	7.2247	7.0997	7.3145	0.0718	0.0706	0.0726	65520	63177	65479	0.1003	0.0969	0.1004	0.8202	0.8208	0.8348
D215	DT	8.6781	8.5712	8.8162	0.0869	0.0857	0.0881	80087	78896	81437	0.1226	0.1207	0.1246	0.7335	0.7235	0.7431
D215	RF	6.3055	6.2117	6.3854	0.0628	0.0618	0.0638	57481	56682	58204	0.0880	0.0868	0.0891	0.8627	0.8591	0.8674
D215	GB	7.2335	7.1313	7.3247	0.0712	0.0702	0.0720	63309	62621	64042	0.0969	0.0960	0.0980	0.8335	0.8293	0.8389
D215	MLP	7.5701	7.4411	7.7039	0.0753	0.0741	0.0764	67480	66274	68511	0.1033	0.1015	0.1050	0.8108	0.8024	0.8182
D215	M5P	7.1706	7.0402	7.2688	0.0713	0.0702	0.0723	66167	62745	64659	0.1013	0.0963	0.0991	0.8121	0.8245	0.8371
D216	DT	8.7778	8.6491	8.9138	0.0879	0.0868	0.0892	80730	79594	81901	0.1236	0.1218	0.1257	0.7292	0.7206	0.7386
D216	RF	6.3294	6.2276	6.3995	0.0631	0.0621	0.0640	57613	56760	58341	0.0882	0.0868	0.0893	0.8621	0.8591	0.8672
D216	GB	7.2151	7.0952	7.3015	0.0710	0.0699	0.0718	63155	62407	63872	0.0967	0.0956	0.0977	0.8343	0.8296	0.8395
D216	MLP	7.5440	7.4025	7.6361	0.0751	0.0738	0.0762	67479	66158	68294	0.1033	0.1014	0.1046	0.8108	0.8028	0.8170
D216	M5P	7.1173	7.0109	7.2266	0.0708	0.0697	0.0719	64663	62538	64907	0.0990	0.0959	0.0994	0.8250	0.8241	0.8386
D217	DT	8.7558	8.6303	8.8379	0.0877	0.0864	0.0888	80619	79451	81745	0.1234	0.1213	0.1251	0.7300	0.7222	0.7390
D217	RF	6.3165	6.2005	6.3993	0.0629	0.0618	0.0638	57573	56764	58321	0.0881	0.0868	0.0893	0.8623	0.8584	0.8671
D217	GB	7.2273	7.1328	7.3219	0.0711	0.0701	0.0719	63271	62506	64034	0.0969	0.0959	0.0980	0.8337	0.8296	0.8392
D217	MLP	7.6392	7.5280	7.7500	0.0759	0.0746	0.0768	68027	66745	69109	0.1041	0.1021	0.1058	0.8077	0.8012	0.8143
D217	M5P	7.1852	7.0582	7.2807	0.0714	0.0703	0.0724	66418	62880	65020	0.1017	0.0964	0.0997	0.8106	0.8228	0.8367
D218	DT	8.7712	8.6498	8.8715	0.0879	0.0866	0.0890	80770	79758	81874	0.1237	0.1218	0.1258	0.7289	0.7200	0.7369
D218	RF	6.3301	6.2328	6.4069	0.0631	0.0621	0.0640	57616	56754	58296	0.0882	0.0868	0.0892	0.8621	0.8588	0.8672
D218	GB	7.2151	7.0952	7.3015	0.0710	0.0699	0.0718	63155	62407	63872	0.0967	0.0956	0.0977	0.8343	0.8296	0.8395
D218	MLP	7.5432	7.4304	7.6198	0.0750	0.0740	0.0757	67320	66123	68058	0.1031	0.1012	0.1043	0.8117	0.8052	0.8182
D218	M5P	7.1261	7.0206	7.2287	0.0709	0.0698	0.0719	64928	62622	65076	0.0994	0.0961	0.0997	0.8233	0.8232	0.8385
D219	DT	8.7503	8.5964	8.8473	0.0877	0.0862	0.0887	80643	79450	81749	0.1235	0.1216	0.1253	0.7298	0.7210	0.7383
D219	RF	6.3110	6.2092	6.3846	0.0629	0.0619	0.0637	57547	56667	58391	0.0881	0.0867	0.0891	0.8624	0.8585	0.8669
D219	GB	7.2268	7.1248	7.3244	0.0711	0.0701	0.0719	63246	62525	64002	0.0968	0.0959	0.0979	0.8338	0.8298	0.8397
D219	MLP	7.6326	7.4876	7.7495	0.0759	0.0745	0.0770	68104	66845	69469	0.1043	0.1021	0.1064	0.8073	0.7989	0.8156
D219	M5P	7.1485	7.0093	7.2318	0.0710	0.0700	0.0720	66827	62598	64614	0.1023	0.0960	0.0990	0.8040	0.8247	0.8384
D220	DT	8.7769	8.6652	8.8902	0.0878	0.0867	0.0891	80678	79449	81892	0.1235	0.1216	0.1255	0.7295	0.7203	0.7373
D220	RF	6.3212	6.2152	6.4017	0.0630	0.0620	0.0639	57617	56629	58347	0.0882	0.0867	0.0894	0.8621	0.8583	0.8668
D220	GB	7.2082	7.1014	7.2976	0.0709	0.0698	0.0718	63089	62398	63813	0.0966	0.0955	0.0976	0.8347	0.8296	0.8398
D220	MLP	7.5081	7.3523	7.6162	0.0747	0.0733	0.0757	67123	65713	68298	0.1028	0.1005	0.1045	0.8128	0.8047	0.8211
D220	M5P	7.1133	6.9715	7.1893	0.0708	0.0695	0.0717	65992	62456	64410	0.1010	0.0959	0.0987	0.8127	0.8265	0.8387

Appendix B (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D221	DT	8.7786	8.6649	8.8638	0.0878	0.0866	0.0890	80807	79861	81984	0.1237	0.1223	0.1256	0.7287	0.7218	0.7362
D221	RF	6.3249	6.2249	6.3789	0.0630	0.0621	0.0639	57585	56700	58219	0.0882	0.0866	0.0890	0.8622	0.8586	0.8667
D221	GB	7.2203	7.1081	7.3103	0.0710	0.0700	0.0718	63202	62495	63933	0.0968	0.0956	0.0977	0.8341	0.8293	0.8389
D221	MLP	7.5429	7.4158	7.6609	0.0750	0.0738	0.0764	67371	66198	68540	0.1031	0.1014	0.1050	0.8114	0.8043	0.8187
D221	M5P	7.1087	6.9848	7.1849	0.0707	0.0696	0.0718	65016	62426	64563	0.0995	0.0959	0.0990	0.8218	0.8255	0.8392
D222	DT	8.7928	8.6900	8.9370	0.0881	0.0868	0.0895	81007	79667	82407	0.1240	0.1217	0.1262	0.7273	0.7180	0.7372
D222	RF	6.3362	6.2329	6.4132	0.0631	0.0622	0.0640	57661	56667	58398	0.0883	0.0868	0.0893	0.8619	0.8588	0.8668
D222	GB	7.2433	7.1329	7.3361	0.0712	0.0702	0.0721	63291	62542	64001	0.0969	0.0957	0.0978	0.8336	0.8287	0.8384
D222	MLP	7.5795	7.4586	7.6984	0.0754	0.0744	0.0765	67555	66590	68483	0.1034	0.1020	0.1045	0.8104	0.8032	0.8163
D222	M5P	7.1559	7.0493	7.2684	0.0712	0.0701	0.0721	64637	62751	65156	0.0990	0.0962	0.0994	0.8260	0.8229	0.8374
D223	DT	8.7873	8.6698	8.8837	0.0880	0.0868	0.0891	80934	80033	82362	0.1239	0.1221	0.1264	0.7279	0.7177	0.7384
D223	RF	6.3334	6.2181	6.4116	0.0631	0.0621	0.0638	57692	56975	58397	0.0883	0.0870	0.0893	0.8617	0.8573	0.8657
D223	GB	7.2496	7.1462	7.3533	0.0713	0.0703	0.0722	63366	62653	64073	0.0970	0.0957	0.0981	0.8332	0.8288	0.8382
D223	MLP	7.5951	7.4746	7.7743	0.0755	0.0742	0.0769	67647	66399	68291	0.1036	0.1016	0.1048	0.8098	0.8019	0.8167
D223	M5P	7.1833	7.0543	7.2635	0.0714	0.0702	0.0723	65933	62930	65017	0.1009	0.0963	0.0994	0.8154	0.8233	0.8368
D224	DT	8.8199	8.6911	8.9515	0.0882	0.0871	0.0898	81036	79699	82461	0.1241	0.1220	0.1261	0.7272	0.7173	0.7355
D224	RF	6.3651	6.2634	6.4489	0.0634	0.0624	0.0645	57867	56950	58566	0.0886	0.0870	0.0896	0.8609	0.8562	0.8655
D224	GB	7.2452	7.1337	7.3420	0.0712	0.0701	0.0721	63319	62599	64036	0.0969	0.0957	0.0980	0.8335	0.8282	0.8381
D224	MLP	7.5722	7.4285	7.7562	0.0753	0.0738	0.0767	67331	65954	68323	0.1031	0.1011	0.1047	0.8116	0.8048	0.8201
D224	M5P	7.1536	7.0159	7.2297	0.0711	0.0698	0.0721	65654	62734	64810	0.1005	0.0961	0.0990	0.8176	0.8244	0.8376
D225	DT	8.8032	8.7150	8.8636	0.0881	0.0869	0.0891	80906	79644	82038	0.1239	0.1221	0.1253	0.7281	0.7197	0.7366
D225	RF	6.3528	6.2273	6.4166	0.0633	0.0623	0.0642	57758	56714	58492	0.0884	0.0867	0.0896	0.8614	0.8573	0.8661
D225	GB	7.2497	7.1434	7.3524	0.0713	0.0703	0.0722	63350	62680	64131	0.0970	0.0957	0.0981	0.8333	0.8286	0.8379
D225	MLP	7.5205	7.3708	7.6409	0.0748	0.0733	0.0761	66978	65928	67962	0.1025	0.1008	0.1042	0.8135	0.8046	0.8216
D225	M5P	7.1394	7.0272	7.2265	0.0710	0.0699	0.0720	64749	62648	64854	0.0991	0.0960	0.0994	0.8248	0.8244	0.8378

Appendix C: Average, First Quartile (Q1), and Third Quartile (Q3) of Model Performance Metrics for Dataset–Model Combinations in Experiments 6.

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D001	DT	10.6362	10.3512	10.8045	0.1052	0.1028	0.1070	86113	84020	87607	0.1404	0.1374	0.1421	0.1470	0.0887	0.2108
D001	RF	8.2437	7.9811	8.3885	0.0811	0.0787	0.0830	65442	63226	67350	0.1067	0.1033	0.1098	0.5080	0.4771	0.5416
D001	GB	8.3849	8.0948	8.6035	0.0823	0.0799	0.0841	65572	63813	67428	0.1069	0.1040	0.1098	0.5066	0.4897	0.5257
D001	MLP	8.5672	8.3536	8.7384	0.0838	0.0814	0.0858	66473	64696	68700	0.1084	0.1052	0.1118	0.4928	0.4654	0.5146
D001	M5P	8.5919	8.3407	8.8505	0.0846	0.0821	0.0868	68083	65623	70448	0.1110	0.1071	0.1144	0.4673	0.4366	0.5013
D002	DT	9.0635	8.8296	9.2369	0.0894	0.0873	0.0908	74674	72613	75980	0.1218	0.1183	0.1239	0.3596	0.3260	0.3996
D002	RF	6.8770	6.6496	7.0754	0.0675	0.0653	0.0694	55004	53397	56914	0.0897	0.0873	0.0931	0.6524	0.6314	0.6678
D002	GB	7.8578	7.6346	8.0289	0.0770	0.0754	0.0788	61239	59441	63153	0.0999	0.0967	0.1027	0.5695	0.5520	0.5851
D002	MLP	8.4448	8.1997	8.6528	0.0826	0.0803	0.0854	65500	63533	67792	0.1068	0.1037	0.1106	0.5076	0.4851	0.5323
D002	M5P	8.0395	7.7601	8.2501	0.0789	0.0764	0.0810	65762	61283	66615	0.1072	0.1006	0.1081	0.4944	0.4776	0.5611
D003	DT	7.9292	7.7204	8.0754	0.0786	0.0767	0.0802	65335	62758	67951	0.1065	0.1030	0.1106	0.5085	0.4769	0.5499
D003	RF	5.6691	5.5331	5.8366	0.0559	0.0544	0.0572	46311	44796	47961	0.0755	0.0729	0.0782	0.7534	0.7380	0.7678
D003	GB	6.1189	5.9805	6.2356	0.0601	0.0588	0.0611	49068	47645	50480	0.0800	0.0777	0.0823	0.7236	0.7082	0.7336
D003	MLP	6.8073	6.6027	7.0024	0.0668	0.0649	0.0690	54101	51904	55649	0.0882	0.0853	0.0908	0.6634	0.6466	0.6844
D003	M5P	6.5476	6.4056	6.7088	0.0648	0.0635	0.0657	53392	51528	55001	0.0871	0.0839	0.0894	0.6717	0.6568	0.6950
D004	DT	7.9773	7.8377	8.1926	0.0789	0.0778	0.0808	65539	64300	66958	0.1069	0.1052	0.1095	0.5066	0.4800	0.5365
D004	RF	5.7757	5.6325	5.9318	0.0568	0.0554	0.0583	46782	45186	47960	0.0763	0.0741	0.0779	0.7484	0.7348	0.7646
D004	GB	6.3055	6.1618	6.4193	0.0619	0.0603	0.0630	50471	48894	51912	0.0823	0.0798	0.0844	0.7075	0.6970	0.7179
D004	MLP	7.0066	6.8764	7.1399	0.0687	0.0670	0.0699	55551	53573	57215	0.0906	0.0880	0.0937	0.6454	0.6295	0.6622
D004	M5P	6.7368	6.5188	6.8640	0.0664	0.0644	0.0675	55320	52417	56361	0.0902	0.0854	0.0916	0.6469	0.6380	0.6820
D005	DT	7.9616	7.7073	8.1856	0.0789	0.0767	0.0814	66110	64086	68341	0.1078	0.1043	0.1113	0.4978	0.4788	0.5318
D005	RF	5.9027	5.7446	6.0863	0.0583	0.0566	0.0598	48368	46862	49769	0.0789	0.0763	0.0813	0.7311	0.7164	0.7499
D005	GB	6.3430	6.2164	6.4463	0.0624	0.0611	0.0634	50960	49957	52024	0.0831	0.0813	0.0844	0.7019	0.6865	0.7131
D005	MLP	6.9975	6.8342	7.1633	0.0690	0.0673	0.0703	56053	53982	57385	0.0914	0.0884	0.0936	0.6392	0.6214	0.6611
D005	M5P	6.6450	6.5031	6.7914	0.0657	0.0645	0.0672	54660	53239	55740	0.0891	0.0865	0.0911	0.6561	0.6352	0.6834
D006	DT	7.6799	7.4562	7.8035	0.0760	0.0737	0.0777	63290	61400	65181	0.1032	0.0997	0.1068	0.5387	0.5084	0.5797
D006	RF	5.5250	5.3946	5.6732	0.0545	0.0531	0.0560	45290	43975	46755	0.0739	0.0717	0.0764	0.7641	0.7499	0.7781
D006	GB	5.9600	5.8588	6.0786	0.0586	0.0574	0.0597	48060	46762	49570	0.0784	0.0764	0.0805	0.7348	0.7215	0.7450
D006	MLP	6.3667	6.2022	6.4732	0.0626	0.0610	0.0640	51307	49281	53281	0.0837	0.0804	0.0866	0.6976	0.6844	0.7128
D006	M5P	6.3330	6.1332	6.4477	0.0627	0.0609	0.0639	53718	50910	54789	0.0876	0.0825	0.0894	0.6635	0.6492	0.7062
D007	DT	7.7349	7.5062	7.8887	0.0765	0.0744	0.0780	63725	61523	65313	0.1039	0.1004	0.1063	0.5322	0.4906	0.5648
D007	RF	5.5391	5.4135	5.6792	0.0546	0.0533	0.0560	45324	43946	46757	0.0739	0.0718	0.0763	0.7637	0.7483	0.7792
D007	GB	5.9908	5.8833	6.1335	0.0589	0.0574	0.0601	48275	47012	49649	0.0787	0.0766	0.0807	0.7325	0.7167	0.7436
D007	MLP	6.4874	6.3237	6.6102	0.0638	0.0624	0.0647	52420	50380	54382	0.0855	0.0822	0.0884	0.6843	0.6714	0.6984
D007	M5P	6.3283	6.1802	6.4159	0.0625	0.0614	0.0634	52532	50958	53713	0.0857	0.0829	0.0874	0.6821	0.6678	0.7077
D008	DT	7.6814	7.5103	7.8518	0.0760	0.0743	0.0777	63377	61649	64934	0.1033	0.1008	0.1063	0.5376	0.5027	0.5703
D008	RF	5.5274	5.3883	5.6709	0.0545	0.0531	0.0561	45291	43977	46758	0.0739	0.0718	0.0763	0.7641	0.7505	0.7777

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D008	GB	5.9598	5.8583	6.0786	0.0586	0.0574	0.0597	48058	46762	49570	0.0784	0.0764	0.0805	0.7348	0.7215	0.7450
D008	MLP	6.4183	6.2542	6.5312	0.0630	0.0612	0.0646	51756	49582	53748	0.0844	0.0810	0.0872	0.6921	0.6775	0.7078
D008	M5P	6.3380	6.1509	6.4372	0.0628	0.0610	0.0639	54026	50804	54945	0.0881	0.0825	0.0897	0.6573	0.6481	0.7055
D009	DT	7.8783	7.6588	8.0623	0.0781	0.0757	0.0800	65289	63158	67382	0.1065	0.1032	0.1100	0.5094	0.4772	0.5509
D009	RF	5.6485	5.5183	5.7969	0.0557	0.0543	0.0573	46217	44535	47423	0.0754	0.0728	0.0775	0.7544	0.7428	0.7751
D009	GB	6.1386	6.0094	6.2921	0.0604	0.0590	0.0616	49439	48222	50452	0.0806	0.0789	0.0820	0.7194	0.7039	0.7311
D009	MLP	6.9241	6.7205	7.1779	0.0683	0.0661	0.0706	55528	53450	57430	0.0905	0.0869	0.0937	0.6459	0.6317	0.6675
D009	M5P	6.6041	6.4362	6.7835	0.0653	0.0640	0.0669	54538	53045	55532	0.0889	0.0863	0.0911	0.6577	0.6438	0.6848
D010	DT	7.7006	7.4625	7.9198	0.0763	0.0742	0.0785	63920	61599	66735	0.1042	0.1003	0.1089	0.5298	0.4911	0.5714
D010	RF	5.5051	5.3647	5.6685	0.0543	0.0529	0.0559	45093	43502	46795	0.0735	0.0707	0.0762	0.7662	0.7522	0.7794
D010	GB	5.8916	5.7698	6.0196	0.0579	0.0567	0.0591	47540	46086	49015	0.0775	0.0753	0.0796	0.7404	0.7231	0.7520
D010	MLP	6.3688	6.2053	6.5113	0.0626	0.0607	0.0644	51419	49204	53300	0.0838	0.0806	0.0867	0.6959	0.6838	0.7178
D010	M5P	6.2307	6.0525	6.3447	0.0617	0.0602	0.0632	52187	50046	54144	0.0851	0.0815	0.0884	0.6866	0.6647	0.7160
D011	DT	7.7794	7.5882	7.9628	0.0769	0.0752	0.0790	64227	62607	66082	0.1047	0.1016	0.1082	0.5252	0.4961	0.5598
D011	RF	5.6286	5.4758	5.7423	0.0555	0.0539	0.0569	46102	44508	47592	0.0752	0.0724	0.0777	0.7556	0.7426	0.7687
D011	GB	6.0759	5.9199	6.2231	0.0597	0.0582	0.0608	48843	47544	50087	0.0796	0.0779	0.0816	0.7262	0.7149	0.7361
D011	MLP	6.7342	6.5703	6.8417	0.0661	0.0645	0.0679	53910	51965	55770	0.0879	0.0844	0.0910	0.6661	0.6517	0.6825
D011	M5P	6.4782	6.3116	6.6049	0.0641	0.0625	0.0655	53318	51963	54803	0.0869	0.0846	0.0894	0.6728	0.6511	0.6928
D012	DT	7.7733	7.6174	7.9565	0.0769	0.0753	0.0788	64259	62791	66003	0.1048	0.1022	0.1076	0.5249	0.4940	0.5459
D012	RF	5.6416	5.5094	5.7944	0.0556	0.0545	0.0572	45977	45271	47150	0.0750	0.0734	0.0774	0.7569	0.7411	0.7740
D012	GB	6.1580	5.9871	6.3230	0.0603	0.0589	0.0621	49224	48132	50323	0.0803	0.0786	0.0819	0.7217	0.7099	0.7366
D012	MLP	7.2293	7.0249	7.4143	0.0705	0.0688	0.0719	57188	55018	59034	0.0932	0.0904	0.0959	0.6242	0.6036	0.6428
D012	M5P	6.4499	6.3251	6.6108	0.0638	0.0623	0.0653	52973	50544	54816	0.0864	0.0829	0.0892	0.6770	0.6484	0.7047
D013	DT	7.6375	7.4215	7.8759	0.0757	0.0732	0.0780	63444	61283	65996	0.1035	0.0995	0.1074	0.5369	0.4950	0.5721
D013	RF	5.4976	5.3582	5.6511	0.0543	0.0525	0.0562	45140	43586	46796	0.0736	0.0708	0.0762	0.7656	0.7520	0.7820
D013	GB	5.9704	5.8030	6.1015	0.0587	0.0571	0.0603	48046	46496	49485	0.0783	0.0761	0.0805	0.7349	0.7183	0.7450
D013	MLP	6.6597	6.4584	6.8325	0.0652	0.0633	0.0668	53262	51216	55174	0.0868	0.0838	0.0897	0.6739	0.6542	0.6885
D013	M5P	6.2865	6.1471	6.4184	0.0622	0.0606	0.0638	51919	49889	53573	0.0847	0.0814	0.0875	0.6895	0.6621	0.7165
D014	DT	7.7527	7.5828	7.9129	0.0767	0.0748	0.0781	63930	62191	65339	0.1042	0.1016	0.1064	0.5298	0.4883	0.5565
D014	RF	5.5169	5.3806	5.6902	0.0544	0.0531	0.0560	45161	43927	46555	0.0736	0.0716	0.0760	0.7654	0.7509	0.7794
D014	GB	6.0792	5.8995	6.2169	0.0597	0.0583	0.0609	48734	47762	49869	0.0795	0.0775	0.0813	0.7273	0.7173	0.7387
D014	MLP	6.9037	6.7574	7.0290	0.0676	0.0660	0.0693	54944	52989	56877	0.0896	0.0870	0.0924	0.6531	0.6393	0.6666
D014	M5P	6.4426	6.2995	6.6116	0.0637	0.0622	0.0654	53197	51116	54601	0.0867	0.0831	0.0894	0.6740	0.6488	0.6999
D015	DT	7.5026	7.3458	7.7149	0.0743	0.0729	0.0761	62290	60691	64245	0.1016	0.0985	0.1042	0.5532	0.5223	0.5898
D015	RF	5.4397	5.3126	5.6018	0.0536	0.0523	0.0551	44724	43524	46376	0.0729	0.0708	0.0756	0.7698	0.7564	0.7866
D015	GB	5.9113	5.7393	6.0108	0.0580	0.0568	0.0591	47641	46430	49218	0.0777	0.0759	0.0800	0.7393	0.7212	0.7499
D015	MLP	6.3696	6.2171	6.5119	0.0625	0.0612	0.0643	51573	49796	53550	0.0841	0.0814	0.0873	0.6943	0.6827	0.7129

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D015	M5P	6.2247	6.0724	6.3122	0.0615	0.0601	0.0621	51669	49597	53520	0.0843	0.0808	0.0871	0.6922	0.6671	0.7184
D016	DT	7.6085	7.4203	7.7904	0.0753	0.0736	0.0772	62795	60786	64551	0.1024	0.0985	0.1054	0.5465	0.5206	0.5764
D016	RF	5.4481	5.2980	5.6210	0.0537	0.0523	0.0554	44785	43624	46193	0.0730	0.0708	0.0754	0.7692	0.7547	0.7862
D016	GB	5.8717	5.7197	6.0168	0.0577	0.0562	0.0591	47449	46191	48853	0.0774	0.0753	0.0796	0.7414	0.7250	0.7516
D016	MLP	6.2795	6.0959	6.3931	0.0616	0.0600	0.0632	50814	48598	52778	0.0829	0.0795	0.0859	0.7032	0.6894	0.7247
D016	M5P	6.2526	6.1203	6.3499	0.0619	0.0606	0.0628	52712	50729	54092	0.0860	0.0827	0.0881	0.6792	0.6600	0.7086
D017	DT	7.6216	7.4011	7.7366	0.0754	0.0731	0.0769	62883	61338	64690	0.1025	0.0997	0.1058	0.5447	0.5176	0.5893
D017	RF	5.4469	5.3135	5.6046	0.0537	0.0525	0.0554	44720	43528	46212	0.0729	0.0710	0.0752	0.7699	0.7551	0.7881
D017	GB	5.8931	5.7529	5.9906	0.0579	0.0566	0.0589	47480	46280	48979	0.0774	0.0754	0.0796	0.7411	0.7244	0.7516
D017	MLP	6.3430	6.1884	6.4688	0.0623	0.0609	0.0637	51427	49484	53279	0.0839	0.0807	0.0866	0.6961	0.6838	0.7164
D017	M5P	6.2371	6.0683	6.3322	0.0616	0.0606	0.0626	51869	50029	53676	0.0846	0.0818	0.0876	0.6898	0.6622	0.7177
D018	DT	7.6018	7.3885	7.7871	0.0752	0.0734	0.0771	62651	60462	64452	0.1022	0.0982	0.1050	0.5483	0.5182	0.5793
D018	RF	5.4452	5.2906	5.5983	0.0537	0.0523	0.0552	44784	43567	46274	0.0730	0.0708	0.0754	0.7693	0.7551	0.7862
D018	GB	5.8716	5.7197	6.0168	0.0577	0.0562	0.0591	47449	46195	48853	0.0774	0.0753	0.0796	0.7414	0.7250	0.7516
D018	MLP	6.2922	6.1132	6.4240	0.0617	0.0601	0.0632	50956	48719	52975	0.0831	0.0794	0.0863	0.7015	0.6881	0.7186
D018	M5P	6.2552	6.1203	6.3535	0.0619	0.0606	0.0628	52741	50601	54060	0.0860	0.0822	0.0881	0.6788	0.6622	0.7074
D019	DT	7.5581	7.3698	7.7024	0.0748	0.0726	0.0762	62723	60605	64220	0.1023	0.0995	0.1046	0.5472	0.5166	0.5838
D019	RF	5.4425	5.3251	5.6010	0.0537	0.0524	0.0552	44781	43576	46453	0.0730	0.0710	0.0755	0.7693	0.7529	0.7864
D019	GB	5.9000	5.7312	6.0046	0.0579	0.0567	0.0591	47572	46501	49093	0.0776	0.0759	0.0800	0.7401	0.7229	0.7508
D019	MLP	6.3853	6.2061	6.5063	0.0626	0.0609	0.0640	51610	49493	53832	0.0842	0.0807	0.0876	0.6938	0.6805	0.7155
D019	M5P	6.2430	6.0954	6.3229	0.0617	0.0605	0.0624	51975	49865	53651	0.0848	0.0814	0.0874	0.6885	0.6590	0.7108
D020	DT	7.6685	7.4633	7.8913	0.0759	0.0736	0.0780	63562	60772	65833	0.1036	0.0988	0.1072	0.5351	0.5044	0.5716
D020	RF	5.4702	5.3516	5.6438	0.0540	0.0526	0.0556	44899	43144	46749	0.0732	0.0703	0.0760	0.7681	0.7558	0.7836
D020	GB	5.8535	5.6922	5.9858	0.0575	0.0562	0.0588	47308	45767	48714	0.0771	0.0751	0.0795	0.7429	0.7268	0.7548
D020	MLP	6.2557	6.0942	6.4042	0.0613	0.0596	0.0628	50654	48602	52673	0.0826	0.0791	0.0857	0.7050	0.6946	0.7228
D020	M5P	6.2567	6.0701	6.3419	0.0619	0.0600	0.0632	52836	50082	54745	0.0862	0.0814	0.0889	0.6773	0.6564	0.7142
D021	DT	7.6246	7.3966	7.8188	0.0754	0.0731	0.0770	62835	60704	64603	0.1025	0.0988	0.1056	0.5452	0.5093	0.5811
D021	RF	5.4547	5.3349	5.6308	0.0538	0.0526	0.0554	44764	43257	46383	0.0730	0.0706	0.0756	0.7695	0.7536	0.7866
D021	GB	5.8878	5.7485	6.0163	0.0578	0.0566	0.0591	47468	46157	49046	0.0774	0.0755	0.0800	0.7412	0.7257	0.7506
D021	MLP	6.3188	6.1603	6.4502	0.0619	0.0602	0.0634	51062	49103	53426	0.0833	0.0799	0.0868	0.7003	0.6893	0.7216
D021	M5P	6.2618	6.1014	6.3249	0.0619	0.0604	0.0627	52013	50253	53901	0.0848	0.0819	0.0876	0.6883	0.6661	0.7156
D022	DT	7.6239	7.4671	7.8384	0.0755	0.0739	0.0776	63108	61811	64748	0.1029	0.1006	0.1060	0.5418	0.5121	0.5774
D022	RF	5.4946	5.3651	5.6350	0.0542	0.0525	0.0561	45126	43543	46716	0.0736	0.0707	0.0760	0.7658	0.7516	0.7817
D022	GB	5.9704	5.8030	6.1015	0.0587	0.0571	0.0603	48046	46498	49485	0.0783	0.0761	0.0805	0.7349	0.7183	0.7450
D022	MLP	6.7066	6.5437	6.7970	0.0656	0.0638	0.0672	53550	51520	55843	0.0873	0.0843	0.0905	0.6703	0.6506	0.6856
D022	M5P	6.2901	6.1431	6.4232	0.0623	0.0608	0.0638	51977	49962	53588	0.0848	0.0815	0.0874	0.6889	0.6616	0.7173
D023	DT	7.6387	7.4494	7.7831	0.0755	0.0736	0.0772	63292	61668	64574	0.1032	0.1001	0.1054	0.5386	0.5134	0.5713

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D023	RF	5.4997	5.3751	5.6434	0.0543	0.0529	0.0556	45113	43656	46607	0.0736	0.0711	0.0760	0.7659	0.7513	0.7801
D023	GB	6.0372	5.8616	6.1748	0.0591	0.0577	0.0604	48262	46963	49197	0.0787	0.0768	0.0805	0.7325	0.7183	0.7437
D023	MLP	7.1906	7.0068	7.3449	0.0701	0.0685	0.0719	56837	54585	58618	0.0927	0.0893	0.0958	0.6287	0.6068	0.6466
D023	M5P	6.2684	6.0733	6.4128	0.0620	0.0600	0.0636	52211	49377	53828	0.0851	0.0801	0.0884	0.6858	0.6560	0.7177
D024	DT	7.6205	7.3487	7.8764	0.0754	0.0725	0.0782	63326	61036	65319	0.1033	0.0993	0.1062	0.5388	0.5089	0.5695
D024	RF	5.5225	5.3878	5.7221	0.0545	0.0529	0.0561	45275	43588	46585	0.0738	0.0716	0.0765	0.7643	0.7515	0.7809
D024	GB	5.9480	5.7596	6.0773	0.0584	0.0567	0.0597	47773	46253	48897	0.0779	0.0758	0.0797	0.7377	0.7243	0.7523
D024	MLP	6.8505	6.6854	6.9900	0.0669	0.0652	0.0684	54408	52716	55740	0.0887	0.0860	0.0908	0.6596	0.6427	0.6785
D024	M5P	6.2843	6.1063	6.4330	0.0622	0.0603	0.0637	52226	49949	54222	0.0852	0.0814	0.0885	0.6859	0.6561	0.7065
D025	DT	7.6768	7.5068	7.8451	0.0760	0.0740	0.0773	63486	61780	65388	0.1035	0.1009	0.1067	0.5362	0.5086	0.5641
D025	RF	5.5344	5.3864	5.7193	0.0546	0.0531	0.0561	45293	43937	46605	0.0739	0.0713	0.0761	0.7640	0.7485	0.7808
D025	GB	6.0078	5.8495	6.1605	0.0589	0.0575	0.0603	48103	46760	49384	0.0784	0.0765	0.0804	0.7343	0.7209	0.7440
D025	MLP	6.9983	6.8418	7.1888	0.0683	0.0667	0.0702	55588	53699	57164	0.0906	0.0874	0.0928	0.6447	0.6230	0.6645
D025	M5P	6.3113	6.1563	6.4808	0.0624	0.0606	0.0639	52222	50085	54249	0.0852	0.0818	0.0886	0.6861	0.6611	0.7158
D026	DT	7.4129	7.1642	7.6511	0.0733	0.0709	0.0753	61785	59264	63725	0.1008	0.0973	0.1041	0.5604	0.5268	0.5998
D026	RF	5.4059	5.2510	5.5656	0.0532	0.0518	0.0549	44463	42735	46045	0.0725	0.0698	0.0751	0.7725	0.7549	0.7915
D026	GB	5.8913	5.7112	6.0041	0.0578	0.0562	0.0589	47426	46261	48502	0.0773	0.0759	0.0791	0.7417	0.7272	0.7521
D026	MLP	6.3614	6.2299	6.4838	0.0625	0.0612	0.0639	51305	49425	53156	0.0837	0.0811	0.0866	0.6976	0.6885	0.7145
D026	M5P	6.2337	6.0708	6.3740	0.0616	0.0601	0.0633	51357	49299	53239	0.0837	0.0808	0.0867	0.6965	0.6669	0.7213
D027	DT	7.4793	7.2940	7.7000	0.0740	0.0722	0.0761	61872	60538	63163	0.1009	0.0986	0.1031	0.5595	0.5283	0.5949
D027	RF	5.4266	5.2721	5.5803	0.0535	0.0520	0.0555	44616	43263	46155	0.0728	0.0701	0.0753	0.7709	0.7539	0.7882
D027	GB	5.8875	5.7163	6.0103	0.0578	0.0564	0.0590	47411	46046	48613	0.0773	0.0756	0.0794	0.7418	0.7278	0.7525
D027	MLP	6.3032	6.1385	6.4439	0.0619	0.0604	0.0637	50765	48856	52707	0.0828	0.0802	0.0857	0.7038	0.6907	0.7210
D027	M5P	6.2312	6.0481	6.3571	0.0616	0.0601	0.0632	51446	49377	53296	0.0839	0.0804	0.0866	0.6954	0.6664	0.7209
D028	DT	7.4757	7.2595	7.6424	0.0740	0.0718	0.0758	62167	60500	63279	0.1014	0.0986	0.1035	0.5552	0.5261	0.5946
D028	RF	5.4203	5.2816	5.5855	0.0534	0.0520	0.0553	44568	42848	46112	0.0727	0.0701	0.0753	0.7714	0.7529	0.7914
D028	GB	5.8896	5.7098	5.9862	0.0578	0.0562	0.0588	47399	46196	48450	0.0773	0.0758	0.0792	0.7420	0.7280	0.7520
D028	MLP	6.3429	6.1955	6.5051	0.0623	0.0609	0.0638	51169	49407	52968	0.0834	0.0810	0.0863	0.6992	0.6873	0.7162
D028	M5P	6.2455	6.0707	6.3801	0.0617	0.0600	0.0632	51492	49628	53169	0.0840	0.0808	0.0864	0.6948	0.6671	0.7184
D029	DT	7.4305	7.2160	7.6532	0.0735	0.0714	0.0758	61814	59791	63459	0.1008	0.0977	0.1038	0.5600	0.5267	0.5972
D029	RF	5.4086	5.2461	5.5528	0.0533	0.0517	0.0550	44500	42757	46139	0.0726	0.0699	0.0751	0.7721	0.7544	0.7923
D029	GB	5.8739	5.6969	5.9995	0.0577	0.0562	0.0588	47383	46128	48659	0.0773	0.0756	0.0793	0.7421	0.7265	0.7523
D029	MLP	6.2995	6.1815	6.4230	0.0619	0.0606	0.0634	50987	49077	52822	0.0831	0.0804	0.0861	0.7014	0.6898	0.7175
D029	M5P	6.2537	6.1016	6.3598	0.0618	0.0603	0.0631	51551	49513	53283	0.0841	0.0810	0.0869	0.6942	0.6665	0.7195
D030	DT	7.5016	7.2812	7.6503	0.0742	0.0722	0.0759	62089	60759	63544	0.1012	0.0988	0.1033	0.5564	0.5292	0.5904
D030	RF	5.4303	5.2834	5.5728	0.0535	0.0521	0.0554	44651	43415	46379	0.0728	0.0702	0.0756	0.7706	0.7533	0.7870
D030	GB	5.8671	5.7025	5.9966	0.0576	0.0563	0.0589	47354	46029	48486	0.0772	0.0755	0.0791	0.7425	0.7285	0.7535

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D030	MLP	6.2362	6.0781	6.3688	0.0613	0.0596	0.0628	50512	48568	52357	0.0824	0.0792	0.0852	0.7067	0.6952	0.7232
D030	M5P	6.2801	6.1069	6.3931	0.0621	0.0605	0.0634	52125	50461	53576	0.0850	0.0818	0.0872	0.6872	0.6609	0.7124
D031	DT	7.5078	7.3287	7.7005	0.0743	0.0724	0.0758	62277	60476	63479	0.1016	0.0986	0.1038	0.5537	0.5292	0.5904
D031	RF	5.4308	5.2848	5.5984	0.0535	0.0522	0.0553	44617	43017	46380	0.0728	0.0702	0.0755	0.7709	0.7545	0.7916
D031	GB	5.8752	5.7193	5.9840	0.0577	0.0564	0.0587	47388	46034	48627	0.0773	0.0756	0.0792	0.7421	0.7268	0.7522
D031	MLP	6.3031	6.1287	6.4284	0.0619	0.0606	0.0637	51026	49342	53107	0.0832	0.0802	0.0865	0.7009	0.6870	0.7193
D031	M5P	6.2888	6.1031	6.4100	0.0621	0.0602	0.0636	52051	49889	54050	0.0849	0.0812	0.0883	0.6882	0.6594	0.7155
D032	DT	7.5064	7.2631	7.6717	0.0742	0.0721	0.0761	62093	60390	63582	0.1013	0.0984	0.1039	0.5564	0.5181	0.5940
D032	RF	5.4291	5.2763	5.5585	0.0535	0.0520	0.0554	44632	43355	46152	0.0728	0.0703	0.0753	0.7708	0.7520	0.7880
D032	GB	5.8671	5.7025	5.9972	0.0576	0.0563	0.0589	47354	46029	48486	0.0772	0.0755	0.0791	0.7425	0.7285	0.7535
D032	MLP	6.2674	6.1056	6.4042	0.0615	0.0600	0.0631	50699	48810	52775	0.0827	0.0799	0.0861	0.7046	0.6956	0.7209
D032	M5P	6.2804	6.1084	6.3830	0.0621	0.0605	0.0633	52110	50046	53546	0.0850	0.0817	0.0873	0.6874	0.6634	0.7129
D033	DT	7.4750	7.2749	7.6669	0.0739	0.0720	0.0757	62190	60518	63940	0.1014	0.0987	0.1039	0.5549	0.5195	0.5898
D033	RF	5.4212	5.2696	5.5844	0.0534	0.0520	0.0550	44613	43093	46184	0.0727	0.0700	0.0753	0.7709	0.7534	0.7879
D033	GB	5.8695	5.7139	5.9892	0.0577	0.0562	0.0587	47357	46057	48728	0.0772	0.0757	0.0792	0.7424	0.7258	0.7532
D033	MLP	6.2515	6.1222	6.3876	0.0614	0.0603	0.0628	50596	48663	52529	0.0825	0.0797	0.0854	0.7057	0.6941	0.7264
D033	M5P	6.2799	6.1084	6.4041	0.0620	0.0607	0.0637	52304	50217	53797	0.0853	0.0817	0.0880	0.6845	0.6592	0.7128
D034	DT	7.5340	7.3382	7.6962	0.0745	0.0729	0.0759	62363	60670	63930	0.1017	0.0988	0.1045	0.5521	0.5123	0.5976
D034	RF	5.4342	5.2957	5.6077	0.0536	0.0522	0.0551	44658	42846	46392	0.0728	0.0700	0.0755	0.7705	0.7542	0.7884
D034	GB	5.8522	5.6798	5.9789	0.0575	0.0561	0.0587	47230	45918	48512	0.0770	0.0752	0.0792	0.7437	0.7283	0.7562
D034	MLP	6.2126	6.0617	6.3590	0.0610	0.0594	0.0624	50339	48627	52366	0.0821	0.0792	0.0852	0.7088	0.6986	0.7279
D034	M5P	6.2757	6.0850	6.3870	0.0620	0.0604	0.0636	52038	49733	53903	0.0849	0.0809	0.0878	0.6883	0.6641	0.7169
D035	DT	7.4839	7.2991	7.6833	0.0739	0.0719	0.0759	61941	60082	63567	0.1010	0.0977	0.1038	0.5584	0.5153	0.5966
D035	RF	5.4323	5.2921	5.5878	0.0535	0.0521	0.0553	44626	42989	46195	0.0728	0.0701	0.0755	0.7708	0.7539	0.7879
D035	GB	5.8706	5.7164	5.9881	0.0577	0.0562	0.0587	47341	46029	48754	0.0772	0.0753	0.0794	0.7426	0.7280	0.7536
D035	MLP	6.2347	6.0528	6.3635	0.0612	0.0595	0.0627	50475	48652	52244	0.0823	0.0795	0.0849	0.7071	0.6982	0.7275
D035	M5P	6.2856	6.1080	6.3744	0.0621	0.0603	0.0632	52206	50117	54116	0.0851	0.0820	0.0882	0.6863	0.6609	0.7124
D036	DT	7.4658	7.2629	7.6618	0.0738	0.0719	0.0758	61958	60115	63186	0.1010	0.0986	0.1030	0.5583	0.5365	0.5961
D036	RF	5.4259	5.2894	5.5781	0.0534	0.0521	0.0554	44602	43293	46208	0.0727	0.0703	0.0754	0.7711	0.7536	0.7886
D036	GB	5.8874	5.7163	6.0103	0.0578	0.0564	0.0590	47409	46025	48613	0.0773	0.0756	0.0794	0.7418	0.7278	0.7525
D036	MLP	6.2987	6.1459	6.4545	0.0619	0.0603	0.0636	50860	48952	52572	0.0829	0.0801	0.0856	0.7027	0.6900	0.7220
D036	M5P	6.2436	6.0669	6.3593	0.0617	0.0600	0.0631	51603	49263	53418	0.0841	0.0805	0.0868	0.6935	0.6675	0.7187
D037	DT	7.4852	7.2425	7.7272	0.0740	0.0715	0.0768	62270	60391	64451	0.1015	0.0982	0.1052	0.5536	0.5220	0.5928
D037	RF	5.4146	5.2750	5.5750	0.0534	0.0520	0.0549	44560	42832	46007	0.0727	0.0702	0.0750	0.7715	0.7536	0.7902
D037	GB	5.8873	5.7154	6.0002	0.0578	0.0562	0.0589	47378	46197	48505	0.0773	0.0758	0.0790	0.7422	0.7281	0.7526
D037	MLP	6.3280	6.1915	6.5090	0.0621	0.0608	0.0636	50984	49167	52671	0.0831	0.0805	0.0858	0.7012	0.6901	0.7229
D037	M5P	6.2424	6.0655	6.4062	0.0616	0.0603	0.0630	51811	50106	53014	0.0845	0.0817	0.0862	0.6906	0.6668	0.7211
D038	DT	7.5222	7.3105	7.6995	0.0744	0.0725	0.0758	62404	60675	64065	0.1018	0.0993	0.1041	0.5518	0.5176	0.5892

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D038	RF	5.4314	5.2740	5.5886	0.0535	0.0519	0.0551	44619	42715	46270	0.0728	0.0699	0.0755	0.7709	0.7529	0.7873
D038	GB	5.8768	5.7068	5.9860	0.0577	0.0564	0.0587	47286	46064	48465	0.0771	0.0752	0.0792	0.7431	0.7293	0.7558
D038	MLP	6.3004	6.1669	6.4290	0.0618	0.0603	0.0629	50720	48870	52453	0.0827	0.0797	0.0856	0.7043	0.6929	0.7228
D038	M5P	6.2185	6.0174	6.3597	0.0615	0.0597	0.0632	51442	49408	53420	0.0839	0.0804	0.0869	0.6955	0.6661	0.7210
D039	DT	7.4763	7.2590	7.7331	0.0738	0.0717	0.0763	61824	60311	63347	0.1008	0.0988	0.1034	0.5599	0.5289	0.6003
D039	RF	5.4294	5.2790	5.5981	0.0535	0.0519	0.0554	44594	42858	46092	0.0727	0.0699	0.0754	0.7711	0.7531	0.7888
D039	GB	5.8855	5.7172	5.9975	0.0578	0.0563	0.0589	47399	46278	48593	0.0773	0.0758	0.0793	0.7419	0.7280	0.7539
D039	MLP	6.2734	6.1289	6.4030	0.0616	0.0601	0.0629	50631	48862	52562	0.0826	0.0796	0.0856	0.7053	0.6949	0.7235
D039	M5P	6.2285	6.0672	6.3762	0.0615	0.0599	0.0631	51397	49422	53322	0.0838	0.0805	0.0869	0.6960	0.6678	0.7206
D040	DT	7.4848	7.3048	7.7171	0.0739	0.0722	0.0761	61993	59999	64042	0.1011	0.0977	0.1040	0.5573	0.5196	0.6001
D040	RF	5.4561	5.3137	5.6155	0.0537	0.0523	0.0554	44779	43452	46268	0.0730	0.0709	0.0756	0.7693	0.7506	0.7856
D040	GB	5.9087	5.7577	6.0121	0.0581	0.0567	0.0591	47665	46181	48794	0.0777	0.0758	0.0798	0.7391	0.7246	0.7492
D040	MLP	6.5275	6.3563	6.7050	0.0640	0.0623	0.0658	52605	50482	54321	0.0858	0.0826	0.0884	0.6820	0.6711	0.6974
D040	M5P	6.3524	6.1571	6.5190	0.0627	0.0609	0.0644	52289	49597	54110	0.0853	0.0813	0.0882	0.6854	0.6615	0.7160
D041	DT	7.5271	7.3401	7.7234	0.0743	0.0724	0.0764	61982	60403	63601	0.1011	0.0982	0.1036	0.5575	0.5137	0.5974
D041	RF	5.4418	5.2719	5.6176	0.0536	0.0518	0.0553	44679	43440	46263	0.0729	0.0706	0.0754	0.7704	0.7514	0.7856
D041	GB	5.8689	5.7098	5.9730	0.0577	0.0562	0.0587	47408	46045	48512	0.0773	0.0756	0.0793	0.7419	0.7273	0.7531
D041	MLP	6.3996	6.2065	6.5243	0.0628	0.0608	0.0642	51592	49628	53572	0.0841	0.0811	0.0871	0.6941	0.6776	0.7097
D041	M5P	6.2840	6.0837	6.4339	0.0621	0.0603	0.0638	51781	49119	53307	0.0844	0.0805	0.0871	0.6914	0.6641	0.7199
D042	DT	7.5250	7.3078	7.6843	0.0744	0.0722	0.0762	62232	60463	63538	0.1015	0.0979	0.1037	0.5541	0.5274	0.5876
D042	RF	5.4567	5.3234	5.6295	0.0537	0.0525	0.0555	44816	43080	46383	0.0731	0.0704	0.0756	0.7689	0.7482	0.7863
D042	GB	5.8982	5.7512	5.9985	0.0580	0.0565	0.0592	47580	46046	48729	0.0776	0.0757	0.0793	0.7400	0.7240	0.7489
D042	MLP	6.4854	6.3347	6.6209	0.0636	0.0622	0.0646	52271	50506	54001	0.0852	0.0825	0.0878	0.6861	0.6725	0.7026
D042	M5P	6.3038	6.1535	6.4566	0.0623	0.0607	0.0639	52129	49792	54735	0.0850	0.0812	0.0890	0.6872	0.6608	0.7188
D043	DT	7.5099	7.3197	7.6668	0.0743	0.0723	0.0761	62329	60353	64663	0.1016	0.0985	0.1053	0.5531	0.5183	0.5827
D043	RF	5.4423	5.2954	5.6143	0.0536	0.0522	0.0552	44754	43526	46279	0.0730	0.0707	0.0757	0.7696	0.7517	0.7848
D043	GB	5.8799	5.7446	6.0082	0.0578	0.0566	0.0590	47457	46216	48666	0.0774	0.0753	0.0791	0.7414	0.7269	0.7511
D043	MLP	6.4095	6.2475	6.5509	0.0630	0.0613	0.0644	51868	50097	53921	0.0846	0.0820	0.0876	0.6908	0.6723	0.7111
D043	M5P	6.2713	6.1136	6.4025	0.0620	0.0606	0.0635	51727	49378	53733	0.0843	0.0809	0.0872	0.6920	0.6617	0.7200
D044	DT	7.5561	7.3973	7.7340	0.0747	0.0733	0.0766	62258	60830	64173	0.1015	0.0995	0.1042	0.5539	0.5191	0.5895
D044	RF	5.4498	5.3108	5.6119	0.0537	0.0523	0.0555	44768	43478	46405	0.0730	0.0709	0.0757	0.7695	0.7507	0.7828
D044	GB	5.8679	5.7198	5.9897	0.0577	0.0564	0.0588	47388	46087	48542	0.0773	0.0751	0.0789	0.7421	0.7281	0.7520
D044	MLP	6.2822	6.1271	6.3888	0.0616	0.0600	0.0630	50799	48781	52878	0.0828	0.0798	0.0861	0.7035	0.6885	0.7228
D044	M5P	6.2875	6.0987	6.4689	0.0621	0.0603	0.0637	51958	49555	53742	0.0847	0.0810	0.0876	0.6893	0.6577	0.7159
D045	DT	7.5697	7.3943	7.7832	0.0749	0.0730	0.0768	62449	60888	64224	0.1018	0.0994	0.1043	0.5512	0.5099	0.5896
D045	RF	5.4550	5.3161	5.6394	0.0538	0.0524	0.0553	44844	43367	46241	0.0731	0.0708	0.0757	0.7686	0.7490	0.7854
D045	GB	5.8887	5.7585	6.0101	0.0579	0.0567	0.0591	47529	46268	48842	0.0775	0.0755	0.0794	0.7406	0.7269	0.7507
D045	MLP	6.3984	6.2532	6.5871	0.0629	0.0612	0.0648	51805	49683	53807	0.0845	0.0813	0.0876	0.6916	0.6792	0.7079

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D046	DT	7.5658	7.3744	7.7902	0.0748	0.0731	0.0772	62326	61145	63875	0.1016	0.0995	0.1039	0.5528	0.5167	0.5916
D046	RF	5.4497	5.3216	5.6082	0.0537	0.0524	0.0554	44770	43548	46411	0.0730	0.0710	0.0756	0.7694	0.7510	0.7823
D046	GB	5.8678	5.7198	5.9897	0.0577	0.0564	0.0588	47388	46087	48542	0.0773	0.0751	0.0789	0.7421	0.7281	0.7520
D046	MLP	6.3099	6.1426	6.4637	0.0619	0.0604	0.0632	51035	48766	53282	0.0832	0.0799	0.0868	0.7006	0.6843	0.7205
D046	M5P	6.2847	6.0874	6.4917	0.0621	0.0602	0.0637	51938	49279	53663	0.0847	0.0804	0.0876	0.6894	0.6572	0.7153
D047	DT	7.5493	7.3226	7.7441	0.0747	0.0724	0.0765	62476	60320	64037	0.1019	0.0990	0.1043	0.5508	0.5272	0.5887
D047	RF	5.4510	5.2861	5.6262	0.0537	0.0522	0.0552	44810	43300	46272	0.0731	0.0707	0.0756	0.7690	0.7523	0.7871
D047	GB	5.8730	5.7375	5.9987	0.0577	0.0566	0.0589	47414	46165	48883	0.0773	0.0755	0.0795	0.7418	0.7271	0.7538
D047	MLP	6.4121	6.2512	6.5656	0.0629	0.0611	0.0643	51800	49857	53433	0.0845	0.0818	0.0871	0.6916	0.6761	0.7131
D047	M5P	6.2715	6.1140	6.4128	0.0619	0.0600	0.0635	51586	49567	53369	0.0841	0.0809	0.0870	0.6933	0.6692	0.7198
D048	DT	7.5963	7.3653	7.8338	0.0751	0.0729	0.0771	62843	60798	65217	0.1025	0.0993	0.1064	0.5455	0.5092	0.5811
D048	RF	5.4409	5.2859	5.6097	0.0536	0.0520	0.0553	44753	43354	46398	0.0730	0.0704	0.0757	0.7696	0.7523	0.7817
D048	GB	5.8423	5.6930	5.9716	0.0574	0.0562	0.0588	47233	45766	48668	0.0770	0.0751	0.0792	0.7437	0.7288	0.7568
D048	MLP	6.2487	6.0872	6.4268	0.0613	0.0596	0.0628	50616	48539	52792	0.0825	0.0794	0.0860	0.7055	0.6920	0.7265
D048	M5P	6.2426	6.0601	6.4039	0.0618	0.0600	0.0638	51925	49178	53764	0.0847	0.0804	0.0872	0.6897	0.6653	0.7225
D049	DT	7.5516	7.3799	7.7015	0.0747	0.0731	0.0764	62503	60520	63740	0.1019	0.0989	0.1045	0.5505	0.5254	0.5798
D049	RF	5.4481	5.3027	5.6118	0.0537	0.0522	0.0552	44757	43148	46336	0.0730	0.0703	0.0756	0.7696	0.7507	0.7840
D049	GB	5.8651	5.7217	6.0018	0.0576	0.0563	0.0590	47370	46084	48709	0.0772	0.0751	0.0793	0.7423	0.7289	0.7528
D049	MLP	6.3153	6.1379	6.4360	0.0619	0.0603	0.0632	51027	48890	52873	0.0832	0.0803	0.0858	0.7006	0.6857	0.7231
D049	M5P	6.2843	6.1130	6.4361	0.0621	0.0604	0.0637	51992	49973	54031	0.0848	0.0818	0.0880	0.6888	0.6546	0.7159
D050	DT	7.4537	7.2693	7.6886	0.0736	0.0717	0.0757	61624	59898	63311	0.1005	0.0979	0.1032	0.5631	0.5329	0.5987
D050	RF	5.3982	5.2219	5.5846	0.0532	0.0515	0.0551	44496	43061	45956	0.0726	0.0697	0.0749	0.7722	0.7560	0.7904
D050	GB	5.8751	5.7241	5.9913	0.0577	0.0564	0.0590	47402	46236	48440	0.0773	0.0758	0.0791	0.7419	0.7248	0.7514
D050	MLP	6.5193	6.3440	6.6637	0.0640	0.0621	0.0655	52515	50604	54601	0.0856	0.0829	0.0885	0.6831	0.6665	0.6987
D050	M5P	6.2526	6.0746	6.4157	0.0618	0.0601	0.0633	51350	49543	53128	0.0837	0.0811	0.0870	0.6964	0.6726	0.7215
D051	DT	7.4796	7.2702	7.6546	0.0739	0.0722	0.0759	61863	60248	63486	0.1009	0.0979	0.1035	0.5594	0.5276	0.5968
D051	RF	5.4140	5.2471	5.6028	0.0534	0.0517	0.0554	44581	43134	46043	0.0727	0.0699	0.0751	0.7713	0.7552	0.7880
D051	GB	5.8607	5.6928	5.9914	0.0576	0.0561	0.0588	47366	46035	48610	0.0772	0.0755	0.0795	0.7423	0.7263	0.7527
D051	MLP	6.3430	6.1857	6.4653	0.0622	0.0604	0.0638	51139	49217	52997	0.0834	0.0804	0.0863	0.6995	0.6831	0.7185
D051	M5P	6.2385	6.0788	6.4101	0.0616	0.0602	0.0635	51318	49458	53039	0.0837	0.0808	0.0862	0.6966	0.6666	0.7227
D052	DT	7.4719	7.3179	7.5958	0.0738	0.0723	0.0753	62111	60479	63504	0.1013	0.0986	0.1036	0.5561	0.5210	0.5935
D052	RF	5.4102	5.2515	5.5827	0.0533	0.0518	0.0551	44558	43044	46069	0.0727	0.0699	0.0752	0.7715	0.7552	0.7897
D052	GB	5.8620	5.7033	5.9597	0.0576	0.0561	0.0588	47291	45993	48498	0.0771	0.0756	0.0789	0.7431	0.7273	0.7530
D052	MLP	6.4551	6.2619	6.6051	0.0634	0.0616	0.0652	52195	50286	53948	0.0851	0.0823	0.0881	0.6871	0.6758	0.7037
D052	M5P	6.2600	6.0960	6.4356	0.0618	0.0603	0.0635	51593	49405	54067	0.0841	0.0805	0.0881	0.6932	0.6647	0.7212
D053	DT	7.4707	7.2849	7.6499	0.0738	0.0720	0.0755	61931	59806	63541	0.1010	0.0978	0.1034	0.5584	0.5274	0.5984
D053	RF	5.4073	5.2514	5.5857	0.0533	0.0519	0.0551	44561	43200	46107	0.0727	0.0699	0.0752	0.7715	0.7572	0.7897
D053	GB	5.8707	5.7080	6.0108	0.0577	0.0563	0.0590	47375	46056	48615	0.0772	0.0755	0.0791	0.7422	0.7259	0.7532

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D053	MLP	6.3890	6.2506	6.5037	0.0627	0.0612	0.0644	51720	49613	53722	0.0843	0.0813	0.0875	0.6927	0.6808	0.7108
D053	M5P	6.2649	6.0934	6.4303	0.0619	0.0602	0.0635	51730	49447	53714	0.0844	0.0808	0.0877	0.6919	0.6686	0.7238
D054	DT	7.5007	7.3163	7.6712	0.0741	0.0725	0.0758	61844	60195	63169	0.1008	0.0984	0.1026	0.5598	0.5277	0.5949
D054	RF	5.4195	5.2719	5.5954	0.0534	0.0520	0.0553	44621	43371	46098	0.0728	0.0702	0.0754	0.7709	0.7542	0.7870
D054	GB	5.8520	5.6870	5.9820	0.0575	0.0561	0.0588	47257	45780	48484	0.0771	0.0751	0.0792	0.7435	0.7296	0.7538
D054	MLP	6.2707	6.1023	6.4279	0.0616	0.0598	0.0631	50725	48779	52397	0.0827	0.0797	0.0854	0.7041	0.6884	0.7243
D054	M5P	6.2819	6.1066	6.4119	0.0621	0.0605	0.0635	52024	49713	53934	0.0848	0.0811	0.0879	0.6883	0.6589	0.7195
D055	DT	7.5174	7.3171	7.7232	0.0743	0.0725	0.0760	62303	60589	63571	0.1016	0.0992	0.1037	0.5534	0.5160	0.5920
D055	RF	5.4127	5.2633	5.5914	0.0533	0.0519	0.0551	44592	43254	46256	0.0727	0.0700	0.0753	0.7712	0.7565	0.7894
D055	GB	5.8570	5.7071	5.9897	0.0575	0.0564	0.0588	47245	45891	48474	0.0770	0.0752	0.0789	0.7437	0.7278	0.7534
D055	MLP	6.3434	6.1650	6.4753	0.0623	0.0608	0.0639	51381	49735	53214	0.0838	0.0812	0.0868	0.6966	0.6829	0.7148
D055	M5P	6.2931	6.0856	6.4907	0.0622	0.0603	0.0638	52226	49855	54361	0.0852	0.0810	0.0885	0.6855	0.6547	0.7177
D056	DT	7.5069	7.3097	7.6528	0.0742	0.0726	0.0753	62021	60676	63249	0.1011	0.0985	0.1033	0.5573	0.5249	0.5913
D056	RF	5.4199	5.2596	5.6010	0.0534	0.0519	0.0553	44613	43208	46209	0.0727	0.0699	0.0752	0.7710	0.7556	0.7868
D056	GB	5.8521	5.6870	5.9820	0.0575	0.0561	0.0588	47258	45788	48484	0.0771	0.0751	0.0792	0.7435	0.7296	0.7538
D056	MLP	6.3119	6.1287	6.4255	0.0619	0.0602	0.0631	51026	49071	53179	0.0832	0.0803	0.0865	0.7006	0.6885	0.7201
D056	M5P	6.2857	6.1144	6.4180	0.0621	0.0604	0.0635	52041	49775	53798	0.0849	0.0811	0.0880	0.6881	0.6579	0.7182
D057	DT	7.5104	7.3153	7.7064	0.0743	0.0722	0.0764	62260	60496	63971	0.1015	0.0990	0.1049	0.5539	0.5101	0.5933
D057	RF	5.4075	5.2630	5.5735	0.0533	0.0518	0.0549	44562	43167	46143	0.0727	0.0699	0.0751	0.7715	0.7560	0.7878
D057	GB	5.8564	5.6973	5.9785	0.0575	0.0564	0.0587	47269	46075	48739	0.0771	0.0753	0.0794	0.7434	0.7277	0.7548
D057	MLP	6.3172	6.1876	6.4677	0.0620	0.0608	0.0631	51051	49098	53260	0.0832	0.0806	0.0864	0.7004	0.6843	0.7205
D057	M5P	6.2979	6.1183	6.4601	0.0622	0.0604	0.0640	52308	49887	54144	0.0853	0.0812	0.0884	0.6844	0.6616	0.7198
D058	DT	7.5657	7.3132	7.8011	0.0749	0.0724	0.0772	62716	61180	64016	0.1023	0.0997	0.1047	0.5470	0.5097	0.5846
D058	RF	5.4154	5.2625	5.5801	0.0534	0.0520	0.0551	44620	42916	46086	0.0728	0.0700	0.0750	0.7709	0.7535	0.7844
D058	GB	5.8369	5.6733	5.9589	0.0574	0.0561	0.0586	47197	45712	48624	0.0770	0.0749	0.0793	0.7441	0.7296	0.7552
D058	MLP	6.2255	6.0528	6.3842	0.0611	0.0596	0.0626	50408	48519	52528	0.0822	0.0791	0.0854	0.7078	0.6955	0.7283
D058	M5P	6.2814	6.0477	6.4427	0.0621	0.0603	0.0639	52191	49637	54137	0.0851	0.0806	0.0883	0.6864	0.6554	0.7167
D059	DT	7.5336	7.3695	7.6907	0.0744	0.0726	0.0763	62247	60789	63527	0.1015	0.0993	0.1037	0.5540	0.5169	0.5892
D059	RF	5.4161	5.2696	5.5787	0.0534	0.0520	0.0548	44580	43140	46052	0.0727	0.0700	0.0752	0.7713	0.7580	0.7878
D059	GB	5.8552	5.7050	5.9748	0.0575	0.0562	0.0587	47256	45929	48595	0.0771	0.0753	0.0792	0.7435	0.7296	0.7545
D059	MLP	6.2856	6.0836	6.4306	0.0616	0.0598	0.0635	50731	48948	52253	0.0827	0.0800	0.0852	0.7041	0.6897	0.7228
D059	M5P	6.2882	6.1025	6.4277	0.0621	0.0605	0.0636	52237	50243	53895	0.0852	0.0815	0.0880	0.6858	0.6604	0.7149
D060	DT	7.4747	7.2293	7.7011	0.0739	0.0718	0.0762	61903	59926	63947	0.1009	0.0976	0.1044	0.5590	0.5255	0.5943
D060	RF	5.4167	5.2434	5.6054	0.0534	0.0518	0.0553	44607	43104	46202	0.0727	0.0697	0.0752	0.7710	0.7535	0.7867
D060	GB	5.8606	5.6928	5.9911	0.0576	0.0561	0.0588	47366	46035	48610	0.0772	0.0755	0.0795	0.7423	0.7263	0.7527
D060	MLP	6.3400	6.1357	6.4876	0.0622	0.0605	0.0636	51162	49001	52904	0.0834	0.0802	0.0866	0.6992	0.6857	0.7185
D060	M5P	6.2455	6.0787	6.4202	0.0617	0.0602	0.0635	51399	49511	53206	0.0838	0.0806	0.0864	0.6957	0.6655	0.7235
D061	DT	7.4482	7.2044	7.6515	0.0737	0.0715	0.0757	61753	60114	63470	0.1007	0.0977	0.1034	0.5610	0.5336	0.5973

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D061	RF	5.4080	5.2670	5.5549	0.0533	0.0519	0.0549	44550	43140	46139	0.0726	0.0699	0.0752	0.7716	0.7560	0.7898
D061	GB	5.8608	5.7060	5.9745	0.0576	0.0562	0.0590	47280	46068	48359	0.0771	0.0756	0.0788	0.7432	0.7265	0.7531
D061	MLP	6.4713	6.3302	6.6089	0.0634	0.0622	0.0646	52141	50335	53779	0.0850	0.0823	0.0875	0.6874	0.6750	0.7073
D061	M5P	6.2650	6.0738	6.4556	0.0618	0.0602	0.0637	51643	49769	53244	0.0842	0.0806	0.0868	0.6925	0.6681	0.7255
D062	DT	7.5106	7.3314	7.7148	0.0742	0.0724	0.0763	62267	60665	64110	0.1015	0.0987	0.1046	0.5537	0.5169	0.5823
D062	RF	5.4135	5.2467	5.5896	0.0534	0.0518	0.0550	44570	42892	46023	0.0727	0.0698	0.0751	0.7714	0.7540	0.7848
D062	GB	5.8437	5.6732	5.9726	0.0574	0.0561	0.0587	47216	45764	48740	0.0770	0.0751	0.0793	0.7439	0.7269	0.7552
D062	MLP	6.3188	6.1382	6.4646	0.0619	0.0602	0.0638	50955	49219	52931	0.0831	0.0801	0.0861	0.7015	0.6846	0.7168
D062	M5P	6.2362	6.0474	6.4272	0.0616	0.0601	0.0635	51498	49329	53320	0.0840	0.0805	0.0869	0.6947	0.6610	0.7251
D063	DT	7.4837	7.3117	7.6616	0.0739	0.0717	0.0756	61829	60147	63308	0.1008	0.0977	0.1033	0.5599	0.5267	0.5890
D063	RF	5.4173	5.2526	5.5709	0.0534	0.0519	0.0547	44592	43005	46012	0.0727	0.0697	0.0752	0.7712	0.7537	0.7867
D063	GB	5.8695	5.6992	5.9766	0.0576	0.0562	0.0588	47357	46091	48623	0.0772	0.0755	0.0794	0.7424	0.7266	0.7527
D063	MLP	6.3660	6.1941	6.4847	0.0623	0.0608	0.0638	51305	49563	53239	0.0837	0.0811	0.0866	0.6975	0.6817	0.7149
D063	M5P	6.2418	6.0447	6.4215	0.0616	0.0598	0.0634	51383	49343	53214	0.0838	0.0808	0.0868	0.6959	0.6692	0.7217
D064	DT	7.4823	7.2793	7.6836	0.0739	0.0720	0.0757	62000	60312	63243	0.1011	0.0985	0.1031	0.5576	0.5239	0.5916
D064	RF	5.3986	5.2332	5.5896	0.0532	0.0516	0.0551	44482	42819	46059	0.0725	0.0697	0.0752	0.7723	0.7545	0.7911
D064	GB	5.8669	5.6889	5.9910	0.0576	0.0562	0.0589	47338	46013	48601	0.0772	0.0755	0.0793	0.7426	0.7267	0.7553
D064	MLP	6.3264	6.1995	6.4920	0.0621	0.0608	0.0636	51103	49246	53085	0.0833	0.0804	0.0865	0.7000	0.6902	0.7183
D064	M5P	6.2626	6.0803	6.4265	0.0618	0.0605	0.0634	51540	49778	52949	0.0840	0.0804	0.0866	0.6942	0.6707	0.7218
D065	DT	7.4736	7.2956	7.6234	0.0738	0.0721	0.0755	61730	60053	63050	0.1007	0.0983	0.1028	0.5613	0.5350	0.5978
D065	RF	5.4204	5.2616	5.6066	0.0534	0.0520	0.0553	44607	43272	45976	0.0727	0.0701	0.0754	0.7710	0.7557	0.7880
D065	GB	5.8579	5.6881	5.9646	0.0575	0.0561	0.0586	47323	45967	48553	0.0772	0.0755	0.0794	0.7428	0.7295	0.7531
D065	MLP	6.2840	6.1290	6.4196	0.0617	0.0602	0.0630	50769	48570	52682	0.0828	0.0796	0.0860	0.7037	0.6895	0.7253
D065	M5P	6.3173	6.0956	6.4735	0.0624	0.0605	0.0641	55878	49760	54282	0.0912	0.0819	0.0885	0.5803	0.6662	0.7201
D066	DT	7.4802	7.3383	7.6798	0.0739	0.0726	0.0762	62029	60610	63613	0.1011	0.0986	0.1035	0.5571	0.5305	0.5932
D066	RF	5.4156	5.2519	5.5788	0.0534	0.0518	0.0551	44579	42933	46324	0.0727	0.0697	0.0754	0.7713	0.7548	0.7887
D066	GB	5.8602	5.6955	5.9829	0.0576	0.0562	0.0589	47304	45908	48673	0.0771	0.0754	0.0793	0.7430	0.7271	0.7543
D066	MLP	6.2943	6.1614	6.4343	0.0618	0.0604	0.0633	50844	49010	52436	0.0829	0.0802	0.0853	0.7029	0.6896	0.7179
D066	M5P	6.3087	6.1278	6.4785	0.0622	0.0608	0.0638	52616	49927	54097	0.0858	0.0815	0.0885	0.6790	0.6616	0.7153
D067	DT	7.4896	7.2637	7.7324	0.0740	0.0723	0.0760	61900	59837	63346	0.1009	0.0980	0.1037	0.5588	0.5222	0.5977
D067	RF	5.4061	5.2586	5.5735	0.0533	0.0518	0.0550	44547	43036	46218	0.0726	0.0698	0.0752	0.7717	0.7542	0.7879
D067	GB	5.8619	5.6990	5.9773	0.0576	0.0563	0.0588	47306	46186	48469	0.0771	0.0756	0.0790	0.7430	0.7285	0.7541
D067	MLP	6.2902	6.1081	6.4664	0.0618	0.0601	0.0633	50882	48604	52759	0.0830	0.0798	0.0862	0.7024	0.6911	0.7235
D067	M5P	6.2964	6.1173	6.4589	0.0622	0.0606	0.0638	52177	49786	54180	0.0851	0.0816	0.0882	0.6866	0.6646	0.7163
D068	DT	7.5068	7.3469	7.7167	0.0742	0.0726	0.0763	61851	60349	63646	0.1009	0.0985	0.1037	0.5598	0.5175	0.5971
D068	RF	5.4264	5.2796	5.6032	0.0535	0.0522	0.0552	44664	43497	46129	0.0728	0.0704	0.0753	0.7705	0.7534	0.7859
D068	GB	5.8536	5.6864	5.9825	0.0575	0.0561	0.0588	47261	46042	48455	0.0771	0.0753	0.0789	0.7435	0.7297	0.7546
D068	MLP	6.2359	6.0530	6.3462	0.0612	0.0595	0.0626	50484	48693	52518	0.0823	0.0793	0.0853	0.7071	0.6972	0.7282

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D068	M5P	6.3375	6.1821	6.4818	0.0626	0.0610	0.0640	52839	50170	54663	0.0862	0.0823	0.0890	0.6784	0.6550	0.7104
D069	DT	7.5473	7.3350	7.7637	0.0747	0.0729	0.0767	62609	60725	64267	0.1021	0.0988	0.1049	0.5487	0.5105	0.5858
D069	RF	5.4197	5.2658	5.6005	0.0534	0.0520	0.0550	44615	43171	46261	0.0728	0.0698	0.0753	0.7710	0.7549	0.7889
D069	GB	5.8576	5.6896	5.9732	0.0576	0.0562	0.0589	47283	46101	48564	0.0771	0.0755	0.0790	0.7432	0.7278	0.7555
D069	MLP	6.2582	6.0659	6.4186	0.0615	0.0597	0.0634	50709	48629	52548	0.0827	0.0793	0.0858	0.7045	0.6944	0.7201
D069	M5P	6.3510	6.1498	6.5289	0.0627	0.0612	0.0644	52834	50312	54749	0.0862	0.0819	0.0894	0.6786	0.6504	0.7085
D070	DT	7.5104	7.2897	7.7281	0.0742	0.0722	0.0766	61969	60137	63700	0.1010	0.0984	0.1030	0.5580	0.5157	0.5886
D070	RF	5.4281	5.2700	5.6114	0.0535	0.0521	0.0553	44670	43401	46114	0.0728	0.0703	0.0753	0.7704	0.7529	0.7857
D070	GB	5.8534	5.6864	5.9825	0.0575	0.0561	0.0588	47260	46042	48455	0.0771	0.0753	0.0789	0.7435	0.7297	0.7546
D070	MLP	6.2434	6.0622	6.3877	0.0613	0.0597	0.0628	50518	48496	52747	0.0824	0.0793	0.0857	0.7067	0.6947	0.7256
D070	M5P	6.3413	6.1939	6.4591	0.0626	0.0611	0.0639	52812	50321	54699	0.0861	0.0820	0.0892	0.6787	0.6563	0.7127
D071	DT	7.5223	7.2553	7.7173	0.0745	0.0718	0.0763	62294	60332	64101	0.1016	0.0985	0.1048	0.5531	0.5167	0.5929
D071	RF	5.4203	5.2801	5.5857	0.0534	0.0521	0.0550	44645	43059	46072	0.0728	0.0701	0.0753	0.7707	0.7533	0.7873
D071	GB	5.8586	5.7030	5.9781	0.0576	0.0563	0.0588	47283	45962	48685	0.0771	0.0754	0.0792	0.7432	0.7283	0.7539
D071	MLP	6.2369	6.0579	6.3968	0.0613	0.0595	0.0629	50480	48507	52377	0.0823	0.0792	0.0853	0.7070	0.6978	0.7270
D071	M5P	6.3442	6.1603	6.4970	0.0627	0.0611	0.0644	53098	50511	54657	0.0866	0.0828	0.0895	0.6750	0.6550	0.7067
D072	DT	7.5697	7.3597	7.7690	0.0748	0.0727	0.0768	62578	60828	64442	0.1020	0.0990	0.1055	0.5493	0.5142	0.5841
D072	RF	5.4259	5.2784	5.6040	0.0535	0.0521	0.0553	44679	42864	46066	0.0729	0.0701	0.0751	0.7703	0.7533	0.7837
D072	GB	5.8375	5.6696	5.9720	0.0574	0.0560	0.0586	47200	45721	48526	0.0770	0.0750	0.0794	0.7441	0.7293	0.7554
D072	MLP	6.2068	6.0570	6.3699	0.0610	0.0593	0.0623	50242	48334	52133	0.0819	0.0787	0.0847	0.7098	0.7015	0.7309
D072	M5P	6.3314	6.1245	6.4622	0.0626	0.0607	0.0641	52880	50238	55114	0.0862	0.0819	0.0900	0.6780	0.6491	0.7088
D073	DT	7.5659	7.3535	7.7742	0.0747	0.0726	0.0766	62516	60894	64397	0.1019	0.0993	0.1048	0.5498	0.5183	0.5939
D073	RF	5.4256	5.2738	5.5881	0.0535	0.0520	0.0549	44653	42977	46215	0.0728	0.0701	0.0754	0.7706	0.7542	0.7872
D073	GB	5.8575	5.6882	5.9854	0.0575	0.0561	0.0587	47280	46022	48658	0.0771	0.0752	0.0792	0.7433	0.7290	0.7542
D073	MLP	6.2191	6.0475	6.3288	0.0611	0.0592	0.0624	50343	48600	52288	0.0821	0.0793	0.0853	0.7086	0.6994	0.7295
D073	M5P	6.3245	6.1520	6.4804	0.0625	0.0608	0.0640	52870	50492	54604	0.0862	0.0827	0.0890	0.6780	0.6540	0.7037
D074	DT	7.4964	7.3043	7.7026	0.0741	0.0721	0.0760	61839	60331	63449	0.1008	0.0989	0.1032	0.5598	0.5245	0.5970
D074	RF	5.4192	5.2739	5.6011	0.0534	0.0520	0.0553	44600	43336	46091	0.0727	0.0701	0.0753	0.7711	0.7544	0.7873
D074	GB	5.8580	5.6881	5.9646	0.0575	0.0561	0.0586	47324	45973	48553	0.0772	0.0755	0.0794	0.7428	0.7295	0.7531
D074	MLP	6.2535	6.0762	6.3962	0.0614	0.0598	0.0628	50611	48372	52662	0.0825	0.0789	0.0857	0.7056	0.6933	0.7237
D074	M5P	6.2920	6.1217	6.4772	0.0621	0.0605	0.0639	52180	49910	54109	0.0851	0.0819	0.0882	0.6857	0.6690	0.7187
D075	DT	7.4937	7.3066	7.6974	0.0741	0.0724	0.0763	62191	60826	63846	0.1014	0.0993	0.1042	0.5549	0.5236	0.5979
D075	RF	5.4187	5.2737	5.5701	0.0534	0.0520	0.0550	44627	42973	46193	0.0728	0.0701	0.0753	0.7708	0.7540	0.7889
D075	GB	5.8590	5.6750	5.9691	0.0576	0.0561	0.0589	47279	45948	48476	0.0771	0.0754	0.0792	0.7432	0.7270	0.7548
D075	MLP	6.2705	6.1166	6.4370	0.0616	0.0601	0.0630	50628	48541	52510	0.0826	0.0797	0.0854	0.7053	0.6939	0.7270
D075	M5P	6.3186	6.1531	6.5031	0.0624	0.0608	0.0638	54017	50433	54037	0.0881	0.0825	0.0879	0.6500	0.6578	0.7124
D076	DT	7.5381	7.2864	7.7427	0.0744	0.0721	0.0764	62232	60668	63735	0.1015	0.0985	0.1041	0.5541	0.5317	0.5870
D076	RF	5.4250	5.2621	5.6109	0.0535	0.0519	0.0550	44641	42961	46171	0.0728	0.0699	0.0752	0.7707	0.7543	0.7851

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D076	GB	5.8332	5.6662	5.9557	0.0573	0.0559	0.0586	47173	45775	48714	0.0769	0.0750	0.0793	0.7444	0.7284	0.7560
D076	MLP	6.2525	6.0960	6.4242	0.0614	0.0599	0.0630	50432	48229	52352	0.0822	0.0788	0.0855	0.7075	0.6968	0.7257
D076	M5P	6.2743	6.0906	6.4270	0.0620	0.0606	0.0635	52048	50066	53950	0.0849	0.0811	0.0876	0.6880	0.6599	0.7157
D077	DT	7.5303	7.3518	7.6915	0.0743	0.0726	0.0759	62178	60782	63467	0.1014	0.0990	0.1032	0.5551	0.5244	0.5868
D077	RF	5.4214	5.2609	5.5861	0.0534	0.0519	0.0548	44609	42898	46161	0.0727	0.0698	0.0752	0.7710	0.7534	0.7859
D077	GB	5.8592	5.6850	5.9906	0.0575	0.0562	0.0587	47305	45943	48567	0.0771	0.0753	0.0793	0.7430	0.7287	0.7536
D077	MLP	6.2401	6.1098	6.3940	0.0612	0.0596	0.0625	50458	48299	52296	0.0823	0.0789	0.0854	0.7072	0.6956	0.7291
D077	M5P	6.2673	6.0623	6.4632	0.0619	0.0601	0.0635	51927	49765	53848	0.0847	0.0816	0.0883	0.6891	0.6673	0.7192
D078	DT	7.5215	7.3480	7.7583	0.0744	0.0725	0.0768	62131	60244	63790	0.1013	0.0986	0.1040	0.5557	0.5168	0.5892
D078	RF	5.4433	5.2716	5.6180	0.0536	0.0519	0.0554	44694	43529	46215	0.0729	0.0707	0.0754	0.7702	0.7520	0.7857
D078	GB	5.8687	5.7098	5.9730	0.0577	0.0562	0.0587	47407	46045	48512	0.0773	0.0755	0.0793	0.7419	0.7273	0.7531
D078	MLP	6.3764	6.2033	6.4728	0.0625	0.0608	0.0640	51442	49453	53395	0.0839	0.0811	0.0869	0.6957	0.6767	0.7128
D078	M5P	6.2826	6.0832	6.4484	0.0621	0.0605	0.0638	51849	49094	53361	0.0845	0.0803	0.0870	0.6905	0.6674	0.7210
D079	DT	7.5188	7.2950	7.7769	0.0744	0.0723	0.0767	62174	60285	64219	0.1014	0.0982	0.1050	0.5549	0.5168	0.5938
D079	RF	5.4663	5.3084	5.6465	0.0538	0.0523	0.0554	44881	43319	46119	0.0732	0.0708	0.0756	0.7682	0.7498	0.7870
D079	GB	5.9013	5.7577	5.9946	0.0580	0.0567	0.0592	47599	46272	48718	0.0776	0.0757	0.0794	0.7398	0.7249	0.7512
D079	MLP	6.5011	6.3456	6.6165	0.0637	0.0622	0.0650	52292	50568	54342	0.0853	0.0828	0.0879	0.6857	0.6678	0.7032
D079	M5P	6.3730	6.2011	6.5316	0.0628	0.0612	0.0646	52426	50265	54714	0.0855	0.0822	0.0891	0.6831	0.6658	0.7174
D080	DT	7.5864	7.3589	7.8285	0.0750	0.0732	0.0773	62973	61208	64607	0.1027	0.1001	0.1057	0.5432	0.5063	0.5846
D080	RF	5.4490	5.2603	5.6337	0.0537	0.0517	0.0554	44777	43302	46249	0.0730	0.0704	0.0756	0.7693	0.7506	0.7858
D080	GB	5.8510	5.6871	5.9593	0.0575	0.0562	0.0588	47277	45812	48782	0.0771	0.0754	0.0795	0.7432	0.7250	0.7556
D080	MLP	6.3568	6.1781	6.4830	0.0623	0.0607	0.0636	51232	49359	53092	0.0835	0.0806	0.0863	0.6981	0.6805	0.7143
D080	M5P	6.2550	6.0940	6.3847	0.0618	0.0603	0.0634	51857	49829	53363	0.0846	0.0812	0.0865	0.6905	0.6678	0.7175
D081	DT	7.5829	7.4221	7.7945	0.0749	0.0730	0.0770	62565	60853	64266	0.1020	0.0992	0.1046	0.5492	0.5163	0.5863
D081	RF	5.4619	5.2916	5.6027	0.0538	0.0521	0.0552	44802	43598	46332	0.0731	0.0707	0.0758	0.7690	0.7507	0.7849
D081	GB	5.8955	5.7535	5.9976	0.0579	0.0564	0.0589	47533	46130	48778	0.0775	0.0757	0.0797	0.7405	0.7259	0.7499
D081	MLP	6.3983	6.2367	6.5351	0.0626	0.0611	0.0639	51464	49455	53512	0.0839	0.0810	0.0868	0.6955	0.6773	0.7104
D081	M5P	6.2902	6.1055	6.4846	0.0621	0.0604	0.0639	51818	49679	53476	0.0845	0.0806	0.0870	0.6911	0.6620	0.7175
D082	DT	7.5649	7.2917	7.8640	0.0748	0.0724	0.0774	62641	60342	64761	0.1021	0.0985	0.1059	0.5478	0.5042	0.5984
D082	RF	5.4626	5.2931	5.6274	0.0538	0.0523	0.0556	44883	43391	46197	0.0732	0.0708	0.0757	0.7682	0.7499	0.7853
D082	GB	5.9057	5.7476	6.0198	0.0580	0.0566	0.0591	47668	46206	48956	0.0777	0.0758	0.0798	0.7391	0.7241	0.7507
D082	MLP	6.5099	6.2984	6.6629	0.0638	0.0620	0.0655	52498	50363	54334	0.0856	0.0825	0.0884	0.6834	0.6719	0.6993
D082	M5P	6.3602	6.1692	6.5034	0.0628	0.0611	0.0644	52496	49625	54286	0.0856	0.0814	0.0891	0.6828	0.6521	0.7178
D083	DT	7.5512	7.3338	7.7235	0.0746	0.0725	0.0763	62298	60502	63841	0.1016	0.0987	0.1044	0.5530	0.5159	0.5872
D083	RF	5.4514	5.2812	5.6156	0.0537	0.0520	0.0555	44794	43311	46266	0.0730	0.0708	0.0754	0.7692	0.7502	0.7847
D083	GB	5.8708	5.7246	5.9750	0.0577	0.0563	0.0588	47413	46071	48534	0.0773	0.0758	0.0794	0.7418	0.7263	0.7532
D083	MLP	6.3658	6.1641	6.5791	0.0624	0.0608	0.0644	51365	49270	52839	0.0838	0.0809	0.0860	0.6968	0.6824	0.7153
D083	M5P	6.2998	6.1038	6.4442	0.0623	0.0605	0.0639	52063	49183	53889	0.0849	0.0809	0.0880	0.6879	0.6621	0.7139

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D084	DT	7.5839	7.3963	7.7785	0.0750	0.0732	0.0772	62786	61062	64360	0.1024	0.0997	0.1050	0.5461	0.5174	0.5852
D084	RF	5.4660	5.3281	5.6317	0.0539	0.0525	0.0556	44921	43298	46314	0.0733	0.0705	0.0758	0.7678	0.7480	0.7838
D084	GB	5.8956	5.7408	5.9979	0.0579	0.0565	0.0591	47587	46212	48605	0.0776	0.0758	0.0793	0.7399	0.7236	0.7505
D084	MLP	6.4684	6.2594	6.6175	0.0635	0.0617	0.0651	52180	50076	54123	0.0851	0.0818	0.0882	0.6871	0.6760	0.7040
D084	M5P	6.3093	6.1758	6.4874	0.0623	0.0609	0.0640	52314	50047	54817	0.0853	0.0814	0.0893	0.6850	0.6552	0.7160
D085	DT	7.5640	7.3626	7.7884	0.0748	0.0730	0.0769	62678	60376	64784	0.1022	0.0986	0.1055	0.5479	0.5219	0.5891
D085	RF	5.4547	5.2962	5.6333	0.0538	0.0522	0.0554	44881	43512	46507	0.0732	0.0707	0.0759	0.7683	0.7493	0.7833
D085	GB	5.8818	5.7461	6.0058	0.0578	0.0566	0.0590	47472	46254	48767	0.0774	0.0754	0.0793	0.7412	0.7260	0.7498
D085	MLP	6.4106	6.2108	6.5776	0.0630	0.0611	0.0645	51805	49776	53431	0.0845	0.0813	0.0870	0.6918	0.6763	0.7091
D085	M5P	6.3023	6.1732	6.4328	0.0623	0.0610	0.0639	52240	49782	54246	0.0852	0.0815	0.0881	0.6858	0.6596	0.7154
D086	DT	7.5760	7.4018	7.7214	0.0749	0.0729	0.0763	62547	61318	63482	0.1020	0.1000	0.1042	0.5496	0.5178	0.5913
D086	RF	5.4601	5.3331	5.6169	0.0538	0.0527	0.0554	44891	43677	46356	0.0732	0.0710	0.0757	0.7682	0.7489	0.7807
D086	GB	5.8657	5.7061	5.9999	0.0576	0.0563	0.0588	47365	46037	48551	0.0772	0.0751	0.0790	0.7423	0.7292	0.7505
D086	MLP	6.2957	6.1063	6.4152	0.0618	0.0599	0.0631	50796	48617	53050	0.0828	0.0792	0.0862	0.7034	0.6901	0.7237
D086	M5P	6.2971	6.1291	6.4479	0.0623	0.0607	0.0636	52623	50399	53808	0.0858	0.0815	0.0878	0.6811	0.6502	0.7110
D087	DT	7.5922	7.3933	7.8203	0.0750	0.0730	0.0772	62696	60912	65033	0.1022	0.0994	0.1054	0.5475	0.5106	0.5907
D087	RF	5.4718	5.3170	5.6510	0.0539	0.0525	0.0557	44994	43604	46488	0.0734	0.0708	0.0759	0.7671	0.7480	0.7824
D087	GB	5.8891	5.7378	6.0111	0.0579	0.0565	0.0590	47540	46255	48833	0.0775	0.0756	0.0795	0.7404	0.7259	0.7515
D087	MLP	6.4024	6.2696	6.5819	0.0629	0.0614	0.0645	51850	50010	53842	0.0845	0.0816	0.0873	0.6911	0.6787	0.7099
D087	M5P	6.3129	6.1644	6.4237	0.0624	0.0607	0.0636	52312	49708	54351	0.0853	0.0814	0.0885	0.6851	0.6572	0.7158
D088	DT	7.5831	7.3140	7.8012	0.0750	0.0724	0.0771	62536	60758	64280	0.1020	0.0995	0.1047	0.5495	0.5015	0.5913
D088	RF	5.4591	5.3241	5.6081	0.0538	0.0525	0.0555	44884	43693	46473	0.0732	0.0710	0.0757	0.7683	0.7487	0.7819
D088	GB	5.8657	5.7061	5.9999	0.0576	0.0563	0.0588	47364	46037	48548	0.0772	0.0751	0.0790	0.7424	0.7292	0.7505
D088	MLP	6.3295	6.1582	6.4279	0.0621	0.0604	0.0632	51146	49277	53192	0.0834	0.0804	0.0867	0.6993	0.6849	0.7205
D088	M5P	6.2942	6.1253	6.4534	0.0623	0.0608	0.0638	52697	50127	53826	0.0859	0.0818	0.0876	0.6801	0.6520	0.7115
D089	DT	7.5474	7.3259	7.7120	0.0746	0.0724	0.0764	62358	60542	63900	0.1017	0.0988	0.1045	0.5522	0.5191	0.5936
D089	RF	5.4567	5.2903	5.6465	0.0538	0.0522	0.0553	44900	43449	46471	0.0732	0.0711	0.0761	0.7681	0.7494	0.7835
D089	GB	5.8733	5.7417	6.0011	0.0577	0.0566	0.0588	47442	46219	48764	0.0774	0.0754	0.0793	0.7415	0.7266	0.7531
D089	MLP	6.3503	6.1977	6.4697	0.0623	0.0607	0.0641	51257	49392	53103	0.0836	0.0808	0.0866	0.6980	0.6825	0.7171
D089	M5P	6.3165	6.1445	6.4495	0.0624	0.0602	0.0640	55207	49563	53568	0.0900	0.0808	0.0874	0.5972	0.6596	0.7189
D090	DT	7.6205	7.4212	7.7960	0.0754	0.0734	0.0778	63094	61703	64971	0.1029	0.1002	0.1062	0.5419	0.5055	0.5707
D090	RF	5.4548	5.3080	5.6277	0.0538	0.0522	0.0554	44886	43430	46418	0.0732	0.0706	0.0758	0.7683	0.7510	0.7798
D090	GB	5.8412	5.6900	5.9780	0.0574	0.0561	0.0585	47223	45750	48628	0.0770	0.0749	0.0792	0.7438	0.7275	0.7562
D090	MLP	6.2227	6.0703	6.4122	0.0611	0.0594	0.0630	50333	48672	52210	0.0821	0.0793	0.0851	0.7087	0.6944	0.7311
D090	M5P	6.3154	6.1134	6.4646	0.0625	0.0607	0.0643	53035	49796	54394	0.0865	0.0813	0.0886	0.6757	0.6519	0.7138
D091	DT	7.5800	7.3922	7.8196	0.0749	0.0729	0.0773	62651	60520	64023	0.1022	0.0990	0.1045	0.5480	0.5127	0.5895
D091	RF	5.4580	5.3091	5.6253	0.0538	0.0524	0.0554	44847	43244	46453	0.0731	0.0704	0.0758	0.7687	0.7508	0.7803
D091	GB	5.8711	5.7288	5.9909	0.0577	0.0562	0.0588	47435	45998	48575	0.0773	0.0752	0.0791	0.7416	0.7274	0.7515

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D091	MLP	6.2967	6.1084	6.4546	0.0617	0.0595	0.0635	50754	48685	52645	0.0828	0.0796	0.0861	0.7039	0.6937	0.7246
D091	M5P	6.3386	6.1651	6.4806	0.0626	0.0608	0.0640	52558	50342	54719	0.0857	0.0820	0.0893	0.6820	0.6506	0.7119
D092	DT	7.4541	7.2218	7.6418	0.0737	0.0714	0.0754	61930	59886	63590	0.1010	0.0976	0.1035	0.5585	0.5298	0.5967
D092	RF	5.4142	5.2508	5.5860	0.0534	0.0518	0.0552	44616	43038	46119	0.0728	0.0700	0.0753	0.7709	0.7560	0.7892
D092	GB	5.8760	5.7106	6.0044	0.0577	0.0562	0.0590	47433	46281	48554	0.0773	0.0758	0.0793	0.7416	0.7230	0.7516
D092	MLP	6.4130	6.1982	6.6103	0.0629	0.0608	0.0646	51694	49969	53342	0.0843	0.0817	0.0868	0.6927	0.6726	0.7135
D092	M5P	6.2740	6.0886	6.4439	0.0620	0.0604	0.0637	51807	49676	53828	0.0845	0.0805	0.0879	0.6907	0.6610	0.7215
D093	DT	7.4839	7.3186	7.7380	0.0740	0.0721	0.0762	61922	60111	63595	0.1010	0.0980	0.1037	0.5585	0.5261	0.5957
D093	RF	5.4241	5.2480	5.5925	0.0535	0.0518	0.0553	44683	43220	46267	0.0729	0.0700	0.0753	0.7702	0.7540	0.7851
D093	GB	5.8586	5.7007	5.9846	0.0575	0.0561	0.0588	47356	46040	48610	0.0772	0.0755	0.0793	0.7424	0.7266	0.7537
D093	MLP	6.3236	6.1904	6.4429	0.0621	0.0605	0.0635	50970	48993	52994	0.0831	0.0801	0.0862	0.7015	0.6835	0.7182
D093	M5P	6.2945	6.0905	6.4859	0.0622	0.0603	0.0640	52116	50159	53935	0.0850	0.0815	0.0879	0.6868	0.6565	0.7126
D094	DT	7.5235	7.3331	7.7706	0.0744	0.0722	0.0767	62471	60437	63851	0.1019	0.0990	0.1043	0.5508	0.5138	0.5860
D094	RF	5.4175	5.2710	5.5894	0.0534	0.0519	0.0552	44636	43117	46329	0.0728	0.0698	0.0754	0.7707	0.7547	0.7875
D094	GB	5.8601	5.7061	5.9646	0.0576	0.0562	0.0586	47301	46025	48385	0.0771	0.0756	0.0790	0.7430	0.7257	0.7536
D094	MLP	6.4155	6.2059	6.5359	0.0630	0.0613	0.0644	51807	49663	53794	0.0845	0.0816	0.0875	0.6917	0.6746	0.7119
D094	M5P	6.3115	6.1249	6.5063	0.0624	0.0605	0.0641	52241	49776	54655	0.0852	0.0815	0.0895	0.6854	0.6543	0.7163
D095	DT	7.5058	7.2876	7.6986	0.0742	0.0727	0.0759	62269	60711	64092	0.1015	0.0986	0.1045	0.5536	0.5189	0.5926
D095	RF	5.4211	5.2694	5.5942	0.0534	0.0519	0.0553	44672	43159	46368	0.0728	0.0700	0.0755	0.7704	0.7566	0.7866
D095	GB	5.8679	5.7104	6.0033	0.0576	0.0564	0.0589	47359	46118	48578	0.0772	0.0756	0.0791	0.7424	0.7271	0.7519
D095	MLP	6.2706	6.1184	6.4333	0.0616	0.0601	0.0633	50756	48689	52460	0.0828	0.0799	0.0856	0.7039	0.6890	0.7227
D095	M5P	6.3015	6.0902	6.4989	0.0623	0.0602	0.0640	52529	49603	54619	0.0857	0.0812	0.0897	0.6820	0.6494	0.7131
D096	DT	7.4874	7.3154	7.6742	0.0740	0.0721	0.0757	61976	60604	63248	0.1011	0.0986	0.1036	0.5579	0.5294	0.5893
D096	RF	5.4296	5.2608	5.5951	0.0535	0.0520	0.0553	44724	43154	46221	0.0729	0.0700	0.0755	0.7698	0.7541	0.7846
D096	GB	5.8566	5.6837	5.9798	0.0575	0.0562	0.0587	47288	45911	48610	0.0771	0.0753	0.0792	0.7432	0.7296	0.7533
D096	MLP	6.2715	6.1146	6.4051	0.0616	0.0599	0.0631	50754	48729	53052	0.0828	0.0796	0.0861	0.7040	0.6904	0.7237
D096	M5P	6.3519	6.1654	6.5062	0.0628	0.0610	0.0643	53374	51111	55042	0.0870	0.0827	0.0897	0.6717	0.6453	0.7044
D097	DT	7.5717	7.3436	7.7454	0.0749	0.0728	0.0764	62731	61043	64030	0.1023	0.0995	0.1045	0.5469	0.5089	0.5837
D097	RF	5.4210	5.2729	5.5786	0.0534	0.0520	0.0551	44666	43146	46308	0.0728	0.0699	0.0754	0.7704	0.7552	0.7871
D097	GB	5.8602	5.7105	5.9941	0.0576	0.0564	0.0589	47290	45909	48613	0.0771	0.0754	0.0790	0.7432	0.7282	0.7525
D097	MLP	6.2679	6.0812	6.4042	0.0615	0.0597	0.0629	50776	48913	52725	0.0828	0.0799	0.0859	0.7038	0.6931	0.7207
D097	M5P	6.3578	6.1501	6.5614	0.0628	0.0609	0.0646	53401	50123	55630	0.0871	0.0820	0.0909	0.6709	0.6443	0.7098
D098	DT	7.4917	7.3161	7.6716	0.0740	0.0723	0.0758	61783	60325	63267	0.1007	0.0984	0.1034	0.5607	0.5246	0.5934
D098	RF	5.4306	5.2748	5.6036	0.0535	0.0520	0.0554	44727	43367	46203	0.0729	0.0702	0.0752	0.7698	0.7534	0.7838
D098	GB	5.8566	5.6837	5.9798	0.0575	0.0562	0.0587	47288	45907	48615	0.0771	0.0753	0.0792	0.7432	0.7296	0.7533
D098	MLP	6.2986	6.1278	6.3929	0.0618	0.0596	0.0632	50931	48931	52904	0.0830	0.0798	0.0864	0.7019	0.6887	0.7204
D098	M5P	6.3531	6.1521	6.5264	0.0628	0.0609	0.0644	53316	50799	55154	0.0869	0.0824	0.0900	0.6724	0.6406	0.7054
D099	DT	7.5029	7.3016	7.7223	0.0743	0.0725	0.0763	62273	60327	64118	0.1015	0.0986	0.1044	0.5535	0.5154	0.5910

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D099	RF	5.4202	5.2619	5.5657	0.0534	0.0520	0.0550	44671	43125	46263	0.0728	0.0700	0.0753	0.7704	0.7554	0.7863
D099	GB	5.8571	5.6898	5.9961	0.0575	0.0563	0.0588	47282	46126	48643	0.0771	0.0753	0.0793	0.7432	0.7272	0.7540
D099	MLP	6.3110	6.1423	6.5097	0.0619	0.0599	0.0637	50982	48913	53096	0.0831	0.0799	0.0864	0.7012	0.6873	0.7187
D099	M5P	6.3635	6.1416	6.5633	0.0629	0.0611	0.0647	53648	50582	55129	0.0875	0.0825	0.0900	0.6679	0.6462	0.7055
D100	DT	7.5677	7.3611	7.7553	0.0748	0.0728	0.0767	62626	60830	64133	0.1021	0.0991	0.1044	0.5485	0.5193	0.5892
D100	RF	5.4254	5.2663	5.5771	0.0535	0.0521	0.0551	44705	42902	46179	0.0729	0.0700	0.0752	0.7701	0.7529	0.7834
D100	GB	5.8382	5.6827	5.9669	0.0574	0.0560	0.0586	47198	45671	48416	0.0770	0.0749	0.0793	0.7441	0.7298	0.7538
D100	MLP	6.2206	6.0506	6.4004	0.0611	0.0590	0.0627	50370	48221	52557	0.0821	0.0787	0.0853	0.7083	0.6913	0.7283
D100	M5P	6.3584	6.1480	6.5060	0.0629	0.0608	0.0648	53475	50341	55588	0.0872	0.0817	0.0902	0.6702	0.6392	0.7058
D101	DT	7.5400	7.3622	7.7376	0.0745	0.0726	0.0762	62268	60653	63475	0.1015	0.0989	0.1037	0.5536	0.5270	0.5892
D101	RF	5.4288	5.2660	5.5874	0.0535	0.0520	0.0549	44698	42978	46233	0.0729	0.0701	0.0755	0.7701	0.7545	0.7848
D101	GB	5.8578	5.7116	5.9787	0.0575	0.0563	0.0587	47291	45857	48516	0.0771	0.0752	0.0792	0.7431	0.7307	0.7547
D101	MLP	6.2679	6.1141	6.4399	0.0615	0.0596	0.0630	50710	48843	52644	0.0827	0.0798	0.0860	0.7043	0.6914	0.7256
D101	M5P	6.3418	6.1214	6.5128	0.0627	0.0607	0.0642	53191	50552	54763	0.0867	0.0818	0.0891	0.6739	0.6423	0.7046
D102	DT	7.4703	7.2571	7.6584	0.0739	0.0718	0.0759	61831	59886	63327	0.1008	0.0977	0.1036	0.5597	0.5328	0.5953
D102	RF	5.4255	5.2651	5.6009	0.0535	0.0519	0.0554	44688	43266	46321	0.0729	0.0701	0.0754	0.7702	0.7543	0.7863
D102	GB	5.8585	5.7007	5.9841	0.0575	0.0561	0.0588	47356	46032	48610	0.0772	0.0755	0.0793	0.7424	0.7266	0.7537
D102	MLP	6.3592	6.1615	6.4729	0.0623	0.0604	0.0638	51266	49311	53506	0.0836	0.0803	0.0869	0.6979	0.6802	0.7161
D102	M5P	6.2953	6.0862	6.4792	0.0622	0.0603	0.0640	52144	50087	53778	0.0850	0.0815	0.0879	0.6865	0.6556	0.7140
D103	DT	7.5013	7.2648	7.7604	0.0742	0.0720	0.0766	62182	60267	64118	0.1014	0.0982	0.1046	0.5548	0.5240	0.5951
D103	RF	5.4162	5.2823	5.5653	0.0534	0.0520	0.0549	44639	43157	46106	0.0728	0.0701	0.0752	0.7707	0.7548	0.7876
D103	GB	5.8585	5.6949	5.9759	0.0575	0.0561	0.0587	47272	46117	48352	0.0771	0.0756	0.0790	0.7433	0.7252	0.7541
D103	MLP	6.4780	6.3327	6.6197	0.0635	0.0621	0.0650	52103	50438	53982	0.0850	0.0822	0.0877	0.6880	0.6691	0.7069
D103	M5P	6.3304	6.1434	6.5296	0.0625	0.0608	0.0642	53226	50450	54533	0.0868	0.0820	0.0889	0.6718	0.6520	0.7137
D104	DT	7.5547	7.3438	7.7978	0.0747	0.0725	0.0769	62542	60695	64532	0.1020	0.0985	0.1054	0.5494	0.5150	0.5913
D104	RF	5.4261	5.2511	5.5968	0.0535	0.0519	0.0552	44720	43029	46229	0.0729	0.0700	0.0752	0.7699	0.7528	0.7835
D104	GB	5.8383	5.6814	5.9632	0.0574	0.0560	0.0585	47193	45739	48567	0.0770	0.0752	0.0791	0.7441	0.7272	0.7553
D104	MLP	6.2843	6.1496	6.4160	0.0617	0.0603	0.0630	50727	48548	52771	0.0827	0.0796	0.0858	0.7041	0.6925	0.7257
D104	M5P	6.2998	6.1097	6.4740	0.0623	0.0608	0.0640	52325	50281	53933	0.0853	0.0819	0.0879	0.6846	0.6560	0.7128
D105	DT	7.5053	7.3140	7.7066	0.0741	0.0721	0.0759	61958	60261	64012	0.1010	0.0979	0.1042	0.5578	0.5106	0.5918
D105	RF	5.4284	5.2616	5.5813	0.0535	0.0520	0.0549	44685	43015	46124	0.0729	0.0699	0.0754	0.7702	0.7539	0.7858
D105	GB	5.8660	5.7120	5.9837	0.0576	0.0563	0.0588	47355	45969	48667	0.0772	0.0754	0.0794	0.7424	0.7277	0.7522
D105	MLP	6.3211	6.1299	6.4877	0.0620	0.0600	0.0637	50958	48859	52772	0.0831	0.0796	0.0858	0.7015	0.6870	0.7238
D105	M5P	6.2945	6.0805	6.4788	0.0621	0.0601	0.0640	52100	49399	54021	0.0850	0.0812	0.0881	0.6870	0.6573	0.7157
D106	DT	7.5001	7.2726	7.7365	0.0741	0.0720	0.0767	62084	60298	63953	0.1012	0.0980	0.1042	0.5564	0.5149	0.5923
D106	RF	5.4134	5.2681	5.5903	0.0533	0.0519	0.0550	44601	43000	46186	0.0727	0.0700	0.0753	0.7711	0.7525	0.7872
D106	GB	5.8680	5.6923	5.9910	0.0576	0.0562	0.0589	47346	46008	48599	0.0772	0.0755	0.0793	0.7425	0.7265	0.7546
D106	MLP	6.2921	6.1216	6.4107	0.0618	0.0600	0.0633	50880	48930	52820	0.0830	0.0800	0.0854	0.7025	0.6904	0.7228

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D106	M5P	6.2994	6.1177	6.4970	0.0622	0.0606	0.0638	52399	49655	53886	0.0854	0.0811	0.0880	0.6827	0.6611	0.7195
D107	DT	7.5309	7.3039	7.7876	0.0744	0.0720	0.0767	62148	60426	63747	0.1013	0.0983	0.1043	0.5553	0.5164	0.5873
D107	RF	5.4293	5.2651	5.5953	0.0535	0.0521	0.0552	44712	43288	46100	0.0729	0.0704	0.0753	0.7700	0.7540	0.7854
D107	GB	5.8584	5.6881	5.9658	0.0575	0.0561	0.0586	47326	45978	48567	0.0772	0.0755	0.0794	0.7428	0.7292	0.7531
D107	MLP	6.2605	6.0771	6.3931	0.0615	0.0599	0.0630	50614	48838	52794	0.0825	0.0793	0.0858	0.7056	0.6901	0.7284
D107	M5P	6.3176	6.1333	6.4973	0.0624	0.0607	0.0641	52503	50426	54137	0.0856	0.0824	0.0886	0.6822	0.6555	0.7114
D108	DT	7.5506	7.3707	7.7327	0.0746	0.0727	0.0763	62701	61628	63935	0.1022	0.0999	0.1041	0.5476	0.5162	0.5818
D108	RF	5.4226	5.2781	5.5833	0.0534	0.0520	0.0551	44651	43003	46278	0.0728	0.0699	0.0755	0.7706	0.7530	0.7871
D108	GB	5.8605	5.6969	5.9812	0.0576	0.0563	0.0588	47311	45961	48681	0.0771	0.0754	0.0793	0.7429	0.7270	0.7543
D108	MLP	6.2698	6.1140	6.4239	0.0616	0.0600	0.0631	50684	49082	52551	0.0826	0.0801	0.0852	0.7048	0.6936	0.7238
D108	M5P	6.3493	6.1704	6.5155	0.0627	0.0611	0.0641	53033	50316	55299	0.0865	0.0821	0.0901	0.6750	0.6499	0.7129
D109	DT	7.5077	7.2605	7.7343	0.0742	0.0718	0.0765	62182	60491	64099	0.1014	0.0986	0.1046	0.5547	0.5136	0.5963
D109	RF	5.4201	5.2729	5.5881	0.0534	0.0519	0.0551	44676	43253	46257	0.0729	0.0703	0.0753	0.7704	0.7551	0.7864
D109	GB	5.8608	5.6967	5.9773	0.0576	0.0563	0.0588	47310	46186	48614	0.0771	0.0756	0.0791	0.7429	0.7279	0.7547
D109	MLP	6.2567	6.0762	6.4142	0.0614	0.0600	0.0627	50656	48889	52839	0.0826	0.0796	0.0859	0.7051	0.6926	0.7266
D109	M5P	6.3518	6.1583	6.5249	0.0628	0.0610	0.0641	53354	49967	54866	0.0870	0.0819	0.0896	0.6709	0.6556	0.7099
D110	DT	7.5168	7.3426	7.6627	0.0743	0.0724	0.0757	62049	60257	63538	0.1012	0.0983	0.1035	0.5568	0.5155	0.5912
D110	RF	5.4329	5.2753	5.5935	0.0536	0.0521	0.0553	44732	43278	46284	0.0729	0.0705	0.0753	0.7698	0.7525	0.7853
D110	GB	5.8542	5.6864	5.9826	0.0575	0.0561	0.0588	47267	46028	48463	0.0771	0.0752	0.0789	0.7434	0.7292	0.7546
D110	MLP	6.2425	6.1137	6.3562	0.0613	0.0598	0.0628	50490	48579	52029	0.0823	0.0797	0.0847	0.7070	0.6908	0.7258
D110	M5P	6.4121	6.2072	6.5710	0.0634	0.0614	0.0652	54831	51410	56721	0.0894	0.0842	0.0922	0.6524	0.6314	0.6964
D111	DT	7.5741	7.3905	7.7535	0.0749	0.0731	0.0764	62835	60979	64334	0.1025	0.0998	0.1052	0.5458	0.5074	0.5775
D111	RF	5.4296	5.2754	5.6035	0.0535	0.0520	0.0552	44721	43138	46227	0.0729	0.0702	0.0754	0.7699	0.7539	0.7855
D111	GB	5.8582	5.6903	5.9731	0.0575	0.0562	0.0588	47276	46103	48680	0.0771	0.0755	0.0792	0.7433	0.7293	0.7552
D111	MLP	6.2639	6.1149	6.3825	0.0615	0.0600	0.0628	50723	48887	52742	0.0827	0.0800	0.0861	0.7044	0.6927	0.7269
D111	M5P	6.4148	6.2028	6.6061	0.0633	0.0616	0.0654	53834	50626	55853	0.0878	0.0826	0.0911	0.6660	0.6355	0.7028
D112	DT	7.5241	7.3449	7.7023	0.0744	0.0725	0.0761	62190	60393	64159	0.1014	0.0983	0.1045	0.5548	0.5239	0.5909
D112	RF	5.4311	5.2661	5.5938	0.0535	0.0520	0.0551	44729	43245	46321	0.0729	0.0706	0.0755	0.7698	0.7533	0.7845
D112	GB	5.8542	5.6864	5.9826	0.0575	0.0561	0.0588	47267	46032	48463	0.0771	0.0753	0.0789	0.7434	0.7292	0.7546
D112	MLP	6.2427	6.0564	6.3539	0.0613	0.0595	0.0626	50533	48540	52719	0.0824	0.0791	0.0855	0.7065	0.6931	0.7271
D112	M5P	6.4105	6.2088	6.5812	0.0634	0.0615	0.0650	54717	51691	56792	0.0892	0.0837	0.0923	0.6541	0.6275	0.6947
D113	DT	7.5421	7.3350	7.7754	0.0746	0.0726	0.0769	62452	60663	64257	0.1018	0.0993	0.1049	0.5510	0.5174	0.5844
D113	RF	5.4308	5.3025	5.5873	0.0535	0.0522	0.0550	44726	43243	46293	0.0729	0.0704	0.0753	0.7698	0.7538	0.7860
D113	GB	5.8569	5.6916	5.9792	0.0575	0.0562	0.0588	47269	45948	48733	0.0771	0.0754	0.0793	0.7434	0.7280	0.7545
D113	MLP	6.2585	6.1412	6.3827	0.0614	0.0601	0.0628	50652	48985	52721	0.0826	0.0799	0.0857	0.7051	0.6935	0.7276
D113	M5P	6.3993	6.2049	6.5681	0.0632	0.0617	0.0651	53888	50973	56181	0.0879	0.0831	0.0913	0.6651	0.6488	0.6979
D114	DT	7.5931	7.3971	7.8321	0.0750	0.0730	0.0772	62882	61204	64635	0.1025	0.0996	0.1053	0.5450	0.5052	0.5851
D114	RF	5.4369	5.2704	5.5926	0.0536	0.0521	0.0553	44763	43022	46219	0.0730	0.0701	0.0754	0.7695	0.7540	0.7820

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D114	GB	5.8371	5.6715	5.9712	0.0574	0.0560	0.0587	47199	45710	48719	0.0770	0.0750	0.0795	0.7441	0.7292	0.7549
D114	MLP	6.2281	6.0722	6.3782	0.0612	0.0597	0.0626	50365	48632	52203	0.0821	0.0796	0.0851	0.7083	0.6929	0.7302
D114	M5P	6.4049	6.2418	6.5333	0.0633	0.0618	0.0645	54251	50742	56403	0.0885	0.0829	0.0916	0.6607	0.6324	0.6963
D115	DT	7.5760	7.3452	7.7933	0.0748	0.0728	0.0769	62649	60549	64033	0.1022	0.0989	0.1046	0.5479	0.5148	0.5910
D115	RF	5.4370	5.2857	5.5887	0.0536	0.0521	0.0550	44760	43172	46283	0.0730	0.0702	0.0755	0.7695	0.7530	0.7844
D115	GB	5.8595	5.6984	5.9850	0.0576	0.0562	0.0587	47287	45971	48650	0.0771	0.0752	0.0792	0.7432	0.7293	0.7539
D115	MLP	6.2203	6.0677	6.3370	0.0611	0.0595	0.0625	50386	48566	52251	0.0822	0.0793	0.0851	0.7082	0.6962	0.7274
D115	M5P	6.3945	6.1867	6.5400	0.0632	0.0617	0.0647	54291	51429	55986	0.0885	0.0837	0.0909	0.6600	0.6292	0.6959
D116	DT	7.4865	7.2514	7.7408	0.0740	0.0717	0.0763	61803	59777	63597	0.1008	0.0975	0.1038	0.5602	0.5205	0.5963
D116	RF	5.4301	5.2745	5.6216	0.0535	0.0521	0.0553	44696	43355	46308	0.0729	0.0702	0.0755	0.7701	0.7540	0.7855
D116	GB	5.8583	5.6881	5.9649	0.0575	0.0561	0.0586	47328	45960	48567	0.0772	0.0755	0.0794	0.7427	0.7292	0.7531
D116	MLP	6.2391	6.0717	6.3495	0.0613	0.0599	0.0627	50447	48701	52475	0.0823	0.0797	0.0853	0.7075	0.6911	0.7263
D116	M5P	6.3168	6.1516	6.4888	0.0624	0.0608	0.0641	52531	50443	54160	0.0857	0.0825	0.0886	0.6820	0.6553	0.7108
D117	DT	7.5156	7.2969	7.7958	0.0743	0.0721	0.0772	62208	60806	63789	0.1014	0.0987	0.1047	0.5544	0.5188	0.5986
D117	RF	5.4249	5.2995	5.5784	0.0535	0.0522	0.0551	44690	43160	46248	0.0729	0.0703	0.0754	0.7702	0.7541	0.7862
D117	GB	5.8604	5.6766	5.9710	0.0576	0.0561	0.0589	47282	45915	48491	0.0771	0.0754	0.0792	0.7432	0.7270	0.7548
D117	MLP	6.2725	6.1527	6.4592	0.0616	0.0603	0.0635	50630	48851	52526	0.0826	0.0799	0.0855	0.7053	0.6910	0.7266
D117	M5P	6.3664	6.1881	6.5382	0.0628	0.0611	0.0643	53988	50999	54963	0.0880	0.0828	0.0898	0.6608	0.6442	0.7113
D118	DT	7.5783	7.3765	7.8041	0.0749	0.0730	0.0773	62697	60626	64810	0.1022	0.0993	0.1059	0.5477	0.5083	0.5847
D118	RF	5.4340	5.2604	5.6024	0.0536	0.0520	0.0552	44735	43012	46163	0.0729	0.0701	0.0752	0.7697	0.7528	0.7837
D118	GB	5.8330	5.6705	5.9558	0.0573	0.0559	0.0586	47150	45767	48759	0.0769	0.0750	0.0793	0.7446	0.7289	0.7555
D118	MLP	6.2378	6.0682	6.3894	0.0612	0.0597	0.0627	50362	48499	52431	0.0821	0.0789	0.0856	0.7084	0.6974	0.7272
D118	M5P	6.3301	6.1521	6.4969	0.0625	0.0609	0.0638	52982	50593	54675	0.0864	0.0824	0.0888	0.6763	0.6431	0.7138
D119	DT	7.5498	7.3135	7.7759	0.0745	0.0723	0.0767	62232	60305	63863	0.1015	0.0986	0.1044	0.5541	0.5243	0.5869
D119	RF	5.4323	5.2784	5.5940	0.0535	0.0519	0.0549	44711	42954	46248	0.0729	0.0700	0.0754	0.7700	0.7530	0.7848
D119	GB	5.8613	5.6833	5.9906	0.0576	0.0562	0.0587	47323	45942	48567	0.0772	0.0753	0.0793	0.7428	0.7287	0.7542
D119	MLP	6.2430	6.0949	6.3705	0.0613	0.0598	0.0625	50477	48523	52644	0.0823	0.0791	0.0853	0.7071	0.6973	0.7276
D119	M5P	6.3210	6.1074	6.5162	0.0624	0.0605	0.0641	53642	49963	54475	0.0875	0.0817	0.0886	0.6592	0.6516	0.7141
D120	DT	7.5419	7.3395	7.6796	0.0745	0.0725	0.0760	62229	60511	63767	0.1015	0.0985	0.1041	0.5538	0.5219	0.5976
D120	RF	5.4524	5.2865	5.6073	0.0537	0.0519	0.0555	44807	43509	46402	0.0731	0.0707	0.0756	0.7691	0.7508	0.7833
D120	GB	5.8707	5.7245	5.9750	0.0577	0.0563	0.0588	47414	46073	48534	0.0773	0.0757	0.0794	0.7418	0.7263	0.7532
D120	MLP	6.3970	6.2207	6.4932	0.0627	0.0609	0.0640	51588	49512	53678	0.0841	0.0805	0.0875	0.6941	0.6807	0.7091
D120	M5P	6.2972	6.1072	6.4470	0.0623	0.0606	0.0636	52150	49143	54010	0.0850	0.0804	0.0879	0.6868	0.6639	0.7127
D121	DT	7.5545	7.3393	7.7743	0.0747	0.0724	0.0769	62419	60322	64714	0.1018	0.0984	0.1056	0.5513	0.5151	0.5934
D121	RF	5.4727	5.2986	5.6336	0.0539	0.0522	0.0555	44954	43499	46248	0.0733	0.0707	0.0759	0.7675	0.7473	0.7837
D121	GB	5.9017	5.7651	6.0066	0.0580	0.0567	0.0590	47626	46325	48765	0.0777	0.0759	0.0793	0.7395	0.7241	0.7509
D121	MLP	6.4898	6.3531	6.6471	0.0636	0.0624	0.0651	52186	50538	53919	0.0851	0.0825	0.0877	0.6870	0.6712	0.7050
D121	M5P	6.3644	6.1519	6.5915	0.0627	0.0606	0.0648	52712	49742	54769	0.0860	0.0816	0.0891	0.6787	0.6591	0.7194

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D122	DT	7.6487	7.4657	7.9252	0.0757	0.0735	0.0782	63356	61782	65188	0.1033	0.1011	0.1063	0.5376	0.5046	0.5743
D122	RF	5.4587	5.2705	5.6332	0.0538	0.0518	0.0557	44880	43416	46350	0.0732	0.0706	0.0757	0.7683	0.7510	0.7845
D122	GB	5.8483	5.6788	5.9767	0.0575	0.0562	0.0587	47270	45762	48647	0.0771	0.0752	0.0794	0.7433	0.7269	0.7556
D122	MLP	6.3673	6.2019	6.5354	0.0624	0.0611	0.0636	51286	49322	52912	0.0836	0.0810	0.0861	0.6976	0.6833	0.7184
D122	M5P	6.2901	6.1225	6.4218	0.0621	0.0607	0.0638	52187	50100	53321	0.0851	0.0815	0.0873	0.6864	0.6662	0.7165
D123	DT	7.5901	7.3865	7.8514	0.0750	0.0732	0.0771	62640	61177	64344	0.1021	0.0993	0.1051	0.5479	0.5125	0.5925
D123	RF	5.4642	5.2919	5.6075	0.0538	0.0521	0.0553	44880	43501	46422	0.0732	0.0708	0.0759	0.7682	0.7486	0.7830
D123	GB	5.8884	5.7380	5.9848	0.0578	0.0563	0.0588	47503	46081	48633	0.0775	0.0756	0.0796	0.7409	0.7264	0.7514
D123	MLP	6.4018	6.2014	6.5259	0.0626	0.0609	0.0642	51595	49787	53508	0.0841	0.0813	0.0870	0.6941	0.6788	0.7125
D123	M5P	6.3146	6.1400	6.4788	0.0623	0.0607	0.0637	52017	49878	53711	0.0848	0.0814	0.0875	0.6886	0.6560	0.7145
D124	DT	7.6047	7.3716	7.9035	0.0752	0.0730	0.0781	62991	61353	65168	0.1027	0.0999	0.1063	0.5433	0.5099	0.5898
D124	RF	5.4567	5.3202	5.6085	0.0538	0.0524	0.0552	44848	43302	46348	0.0731	0.0708	0.0756	0.7686	0.7515	0.7835
D124	GB	5.8771	5.6957	5.9883	0.0577	0.0562	0.0588	47448	46132	48583	0.0774	0.0757	0.0794	0.7414	0.7272	0.7525
D124	MLP	6.3683	6.1916	6.5219	0.0625	0.0606	0.0639	51331	49151	53339	0.0837	0.0801	0.0866	0.6972	0.6864	0.7182
D124	M5P	6.2515	6.0685	6.4169	0.0618	0.0605	0.0634	51812	49489	53169	0.0845	0.0809	0.0867	0.6908	0.6737	0.7180
D125	DT	7.5919	7.4005	7.8569	0.0750	0.0728	0.0779	62645	60894	64258	0.1022	0.0993	0.1042	0.5483	0.5196	0.5874
D125	RF	5.4639	5.3018	5.6173	0.0538	0.0524	0.0554	44899	43621	46231	0.0732	0.0710	0.0754	0.7681	0.7515	0.7815
D125	GB	5.8699	5.7029	5.9874	0.0577	0.0563	0.0588	47434	46060	48691	0.0773	0.0755	0.0793	0.7416	0.7282	0.7551
D125	MLP	6.3429	6.1491	6.4584	0.0622	0.0602	0.0635	51215	49660	53051	0.0835	0.0809	0.0863	0.6985	0.6853	0.7178
D125	M5P	6.2826	6.1110	6.4610	0.0621	0.0604	0.0638	52807	50092	53078	0.0861	0.0820	0.0867	0.6756	0.6674	0.7157
D126	DT	7.6417	7.4571	7.8494	0.0756	0.0737	0.0777	63280	61560	64550	0.1032	0.1004	0.1058	0.5393	0.5099	0.5788
D126	RF	5.4585	5.3080	5.6192	0.0538	0.0523	0.0554	44905	43149	46445	0.0732	0.0707	0.0755	0.7680	0.7524	0.7836
D126	GB	5.8772	5.7068	6.0022	0.0578	0.0563	0.0590	47439	45945	48860	0.0774	0.0755	0.0796	0.7415	0.7273	0.7515
D126	MLP	6.3556	6.2055	6.5060	0.0624	0.0610	0.0641	51262	49573	53208	0.0836	0.0810	0.0865	0.6981	0.6871	0.7132
D126	M5P	6.2968	6.1336	6.4664	0.0622	0.0609	0.0636	52306	49976	53467	0.0853	0.0818	0.0878	0.6848	0.6670	0.7135
D127	DT	7.5929	7.3885	7.8233	0.0751	0.0731	0.0773	62895	61205	64828	0.1026	0.1000	0.1053	0.5448	0.5144	0.5839
D127	RF	5.4539	5.3033	5.6081	0.0537	0.0522	0.0552	44859	43332	46345	0.0731	0.0705	0.0757	0.7685	0.7499	0.7831
D127	GB	5.8716	5.7170	5.9948	0.0577	0.0563	0.0588	47417	46017	48661	0.0773	0.0754	0.0791	0.7418	0.7283	0.7511
D127	MLP	6.2836	6.1345	6.4181	0.0617	0.0601	0.0631	50789	48982	52408	0.0828	0.0802	0.0853	0.7035	0.6893	0.7239
D127	M5P	6.3118	6.1036	6.4688	0.0624	0.0609	0.0642	52433	50039	54112	0.0855	0.0816	0.0887	0.6834	0.6581	0.7155
D128	DT	7.5934	7.4091	7.7661	0.0750	0.0736	0.0765	62664	61393	63887	0.1022	0.0999	0.1049	0.5478	0.5186	0.5817
D128	RF	5.4617	5.3356	5.6176	0.0538	0.0526	0.0554	44900	43639	46347	0.0732	0.0709	0.0757	0.7681	0.7507	0.7799
D128	GB	5.8695	5.7093	5.9822	0.0577	0.0562	0.0588	47417	46055	48550	0.0773	0.0753	0.0790	0.7418	0.7289	0.7522
D128	MLP	6.2279	6.0562	6.3528	0.0611	0.0594	0.0626	50465	48651	52500	0.0823	0.0791	0.0856	0.7073	0.6963	0.7266
D128	M5P	6.3631	6.1498	6.5304	0.0629	0.0611	0.0650	54181	50824	55603	0.0884	0.0834	0.0904	0.6594	0.6404	0.7035
D129	DT	7.6261	7.4435	7.8274	0.0754	0.0735	0.0774	63038	61440	64816	0.1028	0.1001	0.1056	0.5425	0.5080	0.5832
D129	RF	5.4615	5.3138	5.6153	0.0538	0.0524	0.0552	44910	43356	46366	0.0732	0.0706	0.0757	0.7680	0.7498	0.7833
D129	GB	5.8738	5.7218	5.9893	0.0577	0.0564	0.0589	47428	45984	48632	0.0773	0.0755	0.0791	0.7417	0.7286	0.7518

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D129	MLP	6.2486	6.0712	6.3823	0.0614	0.0598	0.0631	50653	48748	52842	0.0826	0.0796	0.0862	0.7052	0.6926	0.7212
D129	M5P	6.3692	6.1684	6.5368	0.0629	0.0612	0.0647	53376	50827	55125	0.0870	0.0823	0.0900	0.6714	0.6501	0.7066
D130	DT	7.6006	7.4267	7.7899	0.0751	0.0729	0.0765	62730	61492	64091	0.1023	0.1001	0.1040	0.5470	0.5163	0.5734
D130	RF	5.4639	5.3210	5.6190	0.0539	0.0526	0.0554	44919	43607	46402	0.0732	0.0708	0.0758	0.7679	0.7510	0.7789
D130	GB	5.8697	5.7093	5.9825	0.0577	0.0562	0.0588	47419	46063	48550	0.0773	0.0753	0.0790	0.7418	0.7289	0.7522
D130	MLP	6.2336	6.0770	6.3494	0.0612	0.0595	0.0626	50509	48771	52544	0.0824	0.0793	0.0855	0.7068	0.6958	0.7254
D130	M5P	6.3694	6.1534	6.5365	0.0630	0.0610	0.0647	55735	50755	56230	0.0909	0.0830	0.0915	0.6299	0.6256	0.7015
D131	DT	7.6134	7.4474	7.8522	0.0753	0.0739	0.0777	62998	61755	65014	0.1027	0.1008	0.1063	0.5433	0.5096	0.5735
D131	RF	5.4620	5.3051	5.6252	0.0538	0.0524	0.0551	44926	43475	46384	0.0733	0.0710	0.0757	0.7678	0.7502	0.7824
D131	GB	5.8670	5.7004	5.9954	0.0577	0.0563	0.0589	47383	45739	48590	0.0773	0.0752	0.0792	0.7421	0.7288	0.7532
D131	MLP	6.2381	6.0779	6.4132	0.0612	0.0594	0.0630	50521	48547	52413	0.0824	0.0794	0.0854	0.7066	0.6961	0.7253
D131	M5P	6.3545	6.1375	6.5708	0.0627	0.0607	0.0647	53288	50990	54708	0.0869	0.0826	0.0892	0.6725	0.6520	0.7070
D132	DT	7.6331	7.3817	7.8413	0.0755	0.0728	0.0778	63156	61032	64910	0.1030	0.0998	0.1056	0.5408	0.5081	0.5812
D132	RF	5.4571	5.3019	5.6101	0.0538	0.0523	0.0551	44903	43178	46409	0.0732	0.0704	0.0757	0.7681	0.7508	0.7800
D132	GB	5.8405	5.6826	5.9714	0.0574	0.0560	0.0588	47228	45791	48586	0.0770	0.0750	0.0795	0.7438	0.7295	0.7560
D132	MLP	6.2269	6.0559	6.3869	0.0611	0.0596	0.0624	50354	48267	52324	0.0821	0.0789	0.0851	0.7085	0.6966	0.7281
D132	M5P	6.3890	6.1810	6.5485	0.0632	0.0610	0.0650	56195	50515	55429	0.0916	0.0822	0.0904	0.6180	0.6416	0.7109
D133	DT	7.6276	7.4145	7.9069	0.0753	0.0732	0.0783	62990	61031	65225	0.1027	0.0997	0.1062	0.5428	0.5100	0.5840
D133	RF	5.4679	5.3145	5.6194	0.0539	0.0525	0.0553	44921	43387	46309	0.0733	0.0707	0.0758	0.7679	0.7488	0.7812
D133	GB	5.8670	5.7105	5.9765	0.0577	0.0564	0.0586	47375	45958	48674	0.0772	0.0754	0.0792	0.7422	0.7286	0.7539
D133	MLP	6.2374	6.0610	6.3665	0.0612	0.0592	0.0627	50537	48587	52554	0.0824	0.0793	0.0854	0.7064	0.6974	0.7258
D133	M5P	6.3485	6.1219	6.5065	0.0627	0.0609	0.0644	53043	50237	54943	0.0865	0.0820	0.0900	0.6756	0.6521	0.7105
D134	DT	7.5806	7.4003	7.7544	0.0749	0.0727	0.0767	62534	60630	63961	0.1020	0.0996	0.1042	0.5496	0.5228	0.5903
D134	RF	5.4637	5.2808	5.6112	0.0538	0.0522	0.0553	44900	43626	46383	0.0732	0.0709	0.0756	0.7681	0.7528	0.7810
D134	GB	5.8698	5.7029	5.9873	0.0577	0.0563	0.0588	47433	46062	48691	0.0773	0.0755	0.0793	0.7416	0.7282	0.7551
D134	MLP	6.3040	6.1102	6.4413	0.0619	0.0601	0.0634	50856	49040	52860	0.0829	0.0799	0.0861	0.7027	0.6895	0.7202
D134	M5P	6.2844	6.1138	6.4848	0.0622	0.0604	0.0639	53250	49904	53080	0.0868	0.0811	0.0864	0.6652	0.6692	0.7130
D135	DT	7.6113	7.3844	7.8048	0.0753	0.0731	0.0773	62883	61040	64388	0.1025	0.0992	0.1047	0.5449	0.5197	0.5817
D135	RF	5.4647	5.3156	5.6141	0.0538	0.0524	0.0553	44915	43250	46510	0.0732	0.0707	0.0758	0.7679	0.7522	0.7833
D135	GB	5.8766	5.6970	5.9855	0.0577	0.0562	0.0588	47434	46169	48500	0.0773	0.0756	0.0794	0.7416	0.7270	0.7521
D135	MLP	6.3518	6.1810	6.4970	0.0622	0.0611	0.0636	51158	49479	52854	0.0834	0.0808	0.0858	0.6990	0.6911	0.7184
D135	M5P	6.3103	6.1058	6.5331	0.0623	0.0606	0.0644	53633	50237	54247	0.0875	0.0818	0.0890	0.6644	0.6625	0.7114
D136	DT	7.6769	7.4766	7.9041	0.0759	0.0736	0.0781	63358	61454	65110	0.1033	0.1001	0.1063	0.5381	0.5145	0.5731
D136	RF	5.4638	5.2929	5.6045	0.0538	0.0522	0.0553	44909	43264	46402	0.0732	0.0706	0.0757	0.7680	0.7518	0.7819
D136	GB	5.8415	5.6865	5.9571	0.0574	0.0560	0.0587	47224	45848	48509	0.0770	0.0752	0.0792	0.7438	0.7273	0.7559
D136	MLP	6.3027	6.1182	6.4526	0.0618	0.0603	0.0636	50801	48730	52640	0.0828	0.0795	0.0856	0.7031	0.6905	0.7224
D136	M5P	6.2771	6.1199	6.4926	0.0621	0.0604	0.0641	52425	49999	53655	0.0855	0.0811	0.0882	0.6832	0.6626	0.7140
D137	DT	7.6409	7.3990	7.8280	0.0755	0.0734	0.0779	62864	61200	64521	0.1025	0.0995	0.1055	0.5450	0.5087	0.5904

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D137	RF	5.4699	5.3010	5.6241	0.0539	0.0523	0.0553	44922	43467	46322	0.0733	0.0708	0.0758	0.7678	0.7495	0.7817
D137	GB	5.8728	5.7218	5.9806	0.0577	0.0564	0.0587	47393	45972	48494	0.0773	0.0754	0.0793	0.7420	0.7267	0.7535
D137	MLP	6.3122	6.1245	6.4063	0.0619	0.0603	0.0631	50829	48724	52576	0.0829	0.0798	0.0854	0.7029	0.6887	0.7226
D137	M5P	6.2534	6.0583	6.4125	0.0618	0.0603	0.0635	51899	49842	53314	0.0846	0.0810	0.0871	0.6898	0.6675	0.7156
D138	DT	7.5584	7.3172	7.7962	0.0746	0.0726	0.0773	62464	60414	64038	0.1019	0.0987	0.1046	0.5514	0.5297	0.5877
D138	RF	5.4506	5.3011	5.6062	0.0537	0.0522	0.0550	44747	43304	46254	0.0730	0.0707	0.0756	0.7697	0.7509	0.7843
D138	GB	5.8785	5.7106	5.9896	0.0578	0.0562	0.0589	47449	46087	48606	0.0774	0.0757	0.0794	0.7414	0.7272	0.7525
D138	MLP	6.3370	6.1677	6.4822	0.0623	0.0605	0.0635	51068	49446	52359	0.0833	0.0803	0.0854	0.7002	0.6804	0.7222
D138	M5P	6.2440	6.0744	6.4476	0.0618	0.0604	0.0637	51515	49132	52878	0.0840	0.0802	0.0861	0.6945	0.6710	0.7202
D139	DT	7.5470	7.3618	7.7480	0.0746	0.0727	0.0767	62302	60976	63990	0.1016	0.0992	0.1042	0.5535	0.5187	0.5842
D139	RF	5.4556	5.2879	5.6012	0.0537	0.0523	0.0552	44789	43506	46190	0.0730	0.0707	0.0756	0.7692	0.7523	0.7834
D139	GB	5.8706	5.7043	5.9874	0.0577	0.0563	0.0588	47439	46050	48683	0.0774	0.0755	0.0793	0.7415	0.7279	0.7551
D139	MLP	6.3228	6.1166	6.5080	0.0620	0.0602	0.0639	51047	49295	52640	0.0832	0.0803	0.0861	0.7005	0.6868	0.7185
D139	M5P	6.2385	6.0611	6.4235	0.0617	0.0602	0.0634	51572	49653	52647	0.0841	0.0809	0.0859	0.6938	0.6761	0.7177
D140	DT	7.5704	7.4142	7.7532	0.0748	0.0729	0.0766	62806	61354	64429	0.1024	0.1000	0.1051	0.5461	0.5111	0.5841
D140	RF	5.4508	5.3087	5.5961	0.0537	0.0523	0.0551	44809	43056	46433	0.0731	0.0705	0.0756	0.7690	0.7512	0.7837
D140	GB	5.8770	5.7150	5.9989	0.0578	0.0563	0.0590	47430	45934	48859	0.0773	0.0755	0.0796	0.7416	0.7276	0.7517
D140	MLP	6.3570	6.1593	6.4911	0.0624	0.0608	0.0636	51265	49277	53255	0.0836	0.0805	0.0867	0.6980	0.6889	0.7206
D140	M5P	6.2657	6.0802	6.4485	0.0618	0.0602	0.0635	51690	49485	52810	0.0843	0.0810	0.0865	0.6921	0.6696	0.7201
D141	DT	7.5461	7.3575	7.7679	0.0746	0.0722	0.0764	62471	60526	64068	0.1019	0.0986	0.1042	0.5509	0.5264	0.5869
D141	RF	5.4423	5.3112	5.5989	0.0536	0.0522	0.0550	44742	43391	46148	0.0730	0.0705	0.0756	0.7697	0.7509	0.7843
D141	GB	5.8736	5.7112	5.9998	0.0577	0.0563	0.0589	47424	46053	48667	0.0773	0.0754	0.0792	0.7417	0.7273	0.7519
D141	MLP	6.2984	6.1497	6.4536	0.0619	0.0605	0.0634	51038	49057	53118	0.0832	0.0807	0.0865	0.7007	0.6906	0.7174
D141	M5P	6.2725	6.0710	6.4226	0.0620	0.0604	0.0636	51941	49673	53779	0.0847	0.0810	0.0880	0.6894	0.6599	0.7194
D142	DT	7.5935	7.3890	7.7696	0.0750	0.0732	0.0767	62568	60789	63808	0.1020	0.0992	0.1039	0.5492	0.5188	0.5849
D142	RF	5.4537	5.3200	5.6016	0.0537	0.0526	0.0552	44794	43576	46231	0.0730	0.0708	0.0756	0.7692	0.7510	0.7817
D142	GB	5.8696	5.7036	5.9831	0.0577	0.0562	0.0588	47406	46062	48555	0.0773	0.0753	0.0790	0.7419	0.7289	0.7527
D142	MLP	6.2249	6.0620	6.3558	0.0612	0.0596	0.0627	50386	48602	52525	0.0822	0.0791	0.0855	0.7082	0.6962	0.7256
D142	M5P	6.3034	6.0877	6.4718	0.0623	0.0606	0.0639	52326	49856	53890	0.0853	0.0811	0.0882	0.6848	0.6602	0.7120
D143	DT	7.5870	7.4039	7.7711	0.0750	0.0733	0.0768	62810	60986	64303	0.1024	0.0995	0.1050	0.5460	0.5114	0.5844
D143	RF	5.4524	5.3077	5.6154	0.0537	0.0523	0.0552	44808	43250	46427	0.0731	0.0706	0.0755	0.7690	0.7523	0.7846
D143	GB	5.8736	5.7151	5.9903	0.0577	0.0563	0.0589	47429	45997	48647	0.0773	0.0755	0.0791	0.7417	0.7278	0.7516
D143	MLP	6.2953	6.1334	6.4428	0.0619	0.0603	0.0633	50948	49158	53005	0.0831	0.0802	0.0864	0.7016	0.6898	0.7195
D143	M5P	6.3003	6.0913	6.4605	0.0622	0.0607	0.0637	52105	49504	53976	0.0850	0.0809	0.0881	0.6875	0.6624	0.7137
D144	DT	7.5953	7.4172	7.7983	0.0750	0.0732	0.0769	62490	60650	63831	0.1019	0.0987	0.1041	0.5502	0.5142	0.5841
D144	RF	5.4541	5.3330	5.6039	0.0538	0.0526	0.0553	44815	43653	46265	0.0731	0.0709	0.0754	0.7690	0.7525	0.7828
D144	GB	5.8698	5.7036	5.9831	0.0577	0.0562	0.0588	47407	46062	48555	0.0773	0.0753	0.0790	0.7419	0.7289	0.7528
D144	MLP	6.2506	6.0934	6.3311	0.0614	0.0599	0.0624	50567	48807	52722	0.0825	0.0796	0.0859	0.7061	0.6952	0.7247

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D144	M5P	6.3023	6.0756	6.4898	0.0623	0.0603	0.0638	52333	49816	54001	0.0853	0.0810	0.0881	0.6846	0.6584	0.7151
D145	DT	7.5788	7.3454	7.7978	0.0750	0.0727	0.0771	62705	60696	64441	0.1022	0.0991	0.1051	0.5476	0.5115	0.5861
D145	RF	5.4550	5.2980	5.6227	0.0538	0.0524	0.0552	44856	43340	46304	0.0731	0.0708	0.0755	0.7685	0.7530	0.7846
D145	GB	5.8658	5.6883	6.0009	0.0576	0.0561	0.0588	47382	45874	48551	0.0773	0.0752	0.0789	0.7422	0.7276	0.7527
D145	MLP	6.2474	6.1053	6.3586	0.0613	0.0600	0.0626	50498	48838	52282	0.0823	0.0798	0.0851	0.7070	0.6915	0.7297
D145	M5P	6.3106	6.1084	6.5018	0.0623	0.0605	0.0642	52315	49712	54033	0.0853	0.0811	0.0885	0.6844	0.6606	0.7196
D146	DT	7.6314	7.3385	7.9150	0.0755	0.0730	0.0783	63161	61452	65526	0.1030	0.0995	0.1074	0.5408	0.5121	0.5811
D146	RF	5.4503	5.3088	5.6053	0.0537	0.0522	0.0552	44838	43185	46402	0.0731	0.0705	0.0756	0.7688	0.7529	0.7811
D146	GB	5.8406	5.6824	5.9706	0.0574	0.0560	0.0588	47216	45767	48582	0.0770	0.0750	0.0795	0.7439	0.7293	0.7562
D146	MLP	6.1998	6.0472	6.3355	0.0609	0.0592	0.0621	50191	48571	52188	0.0818	0.0789	0.0847	0.7104	0.7024	0.7270
D146	M5P	6.2949	6.1176	6.4936	0.0622	0.0606	0.0644	52469	49980	54006	0.0856	0.0811	0.0882	0.6829	0.6594	0.7151
D147	DT	7.6111	7.4225	7.8388	0.0752	0.0734	0.0776	63005	61102	64185	0.1027	0.1003	0.1053	0.5427	0.5122	0.5876
D147	RF	5.4537	5.3091	5.6154	0.0537	0.0524	0.0551	44806	43262	46118	0.0731	0.0705	0.0755	0.7690	0.7494	0.7817
D147	GB	5.8646	5.7105	5.9860	0.0576	0.0564	0.0587	47364	45940	48661	0.0772	0.0754	0.0792	0.7424	0.7286	0.7539
D147	MLP	6.2220	6.0381	6.3616	0.0611	0.0593	0.0627	50313	48574	52322	0.0820	0.0795	0.0854	0.7091	0.6972	0.7306
D147	M5P	6.2896	6.0770	6.4443	0.0621	0.0604	0.0639	52302	49913	54190	0.0853	0.0812	0.0889	0.6849	0.6557	0.7138
D148	DT	7.5508	7.3550	7.7644	0.0746	0.0726	0.0765	62173	60337	63721	0.1014	0.0986	0.1043	0.5555	0.5237	0.5843
D148	RF	5.4557	5.2952	5.6140	0.0537	0.0524	0.0553	44804	43517	46347	0.0731	0.0709	0.0755	0.7691	0.7523	0.7828
D148	GB	5.8707	5.7043	5.9874	0.0577	0.0563	0.0588	47439	46050	48683	0.0774	0.0755	0.0793	0.7416	0.7279	0.7551
D148	MLP	6.3148	6.1394	6.4312	0.0620	0.0600	0.0634	51012	49123	53106	0.0832	0.0802	0.0862	0.7010	0.6875	0.7179
D148	M5P	6.2402	6.0432	6.4348	0.0617	0.0600	0.0636	51612	49363	52851	0.0842	0.0806	0.0862	0.6933	0.6740	0.7192
D149	DT	7.5871	7.3823	7.8312	0.0750	0.0732	0.0769	62781	61091	64251	0.1024	0.0997	0.1047	0.5465	0.5240	0.5769
D149	RF	5.4593	5.3010	5.6176	0.0538	0.0522	0.0554	44849	43341	46392	0.0731	0.0709	0.0757	0.7686	0.7524	0.7830
D149	GB	5.8783	5.7044	5.9893	0.0578	0.0561	0.0588	47447	46144	48594	0.0774	0.0756	0.0794	0.7414	0.7273	0.7526
D149	MLP	6.2598	6.0896	6.3578	0.0615	0.0597	0.0628	50536	48635	52238	0.0824	0.0794	0.0853	0.7064	0.6952	0.7274
D149	M5P	6.2739	6.0916	6.4571	0.0619	0.0601	0.0636	51813	49968	53426	0.0845	0.0813	0.0873	0.6904	0.6748	0.7179
D150	DT	7.6358	7.4830	7.8172	0.0755	0.0737	0.0773	63048	61551	64911	0.1028	0.1003	0.1057	0.5428	0.5137	0.5792
D150	RF	5.4565	5.3038	5.6066	0.0537	0.0520	0.0552	44838	43236	46399	0.0731	0.0706	0.0757	0.7687	0.7521	0.7837
D150	GB	5.8404	5.6768	5.9567	0.0574	0.0560	0.0586	47214	45762	48547	0.0770	0.0752	0.0792	0.7439	0.7270	0.7567
D150	MLP	6.3098	6.1240	6.4794	0.0619	0.0601	0.0632	50876	49052	52579	0.0830	0.0803	0.0860	0.7025	0.6876	0.7236
D150	M5P	6.2255	6.0516	6.3817	0.0616	0.0599	0.0632	51663	49187	53021	0.0842	0.0804	0.0867	0.6926	0.6701	0.7212
D151	DT	7.6032	7.4431	7.8326	0.0751	0.0732	0.0774	62838	61378	64553	0.1025	0.0997	0.1049	0.5455	0.5130	0.5841
D151	RF	5.4586	5.3007	5.6105	0.0538	0.0523	0.0551	44810	43301	46374	0.0731	0.0706	0.0756	0.7690	0.7501	0.7834
D151	GB	5.8723	5.7221	5.9800	0.0577	0.0564	0.0587	47388	45972	48495	0.0773	0.0754	0.0793	0.7421	0.7272	0.7535
D151	MLP	6.2968	6.1005	6.4671	0.0618	0.0598	0.0639	50837	48902	52749	0.0829	0.0800	0.0857	0.7029	0.6864	0.7229
D151	M5P	6.2230	6.0616	6.4089	0.0615	0.0600	0.0632	51443	49507	52801	0.0839	0.0805	0.0859	0.6953	0.6688	0.7229
D152	DT	7.9311	7.7296	8.0630	0.0786	0.0767	0.0804	65409	63625	67977	0.1067	0.1036	0.1107	0.5073	0.4778	0.5458
D152	RF	5.6668	5.5451	5.8471	0.0559	0.0545	0.0573	46281	44835	47925	0.0755	0.0730	0.0781	0.7537	0.7380	0.7681

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D152	GB	6.1189	5.9805	6.2356	0.0601	0.0588	0.0611	49069	47645	50480	0.0800	0.0777	0.0823	0.7236	0.7082	0.7336
D152	MLP	6.7832	6.6125	6.9644	0.0664	0.0645	0.0684	53971	51904	56056	0.0880	0.0850	0.0912	0.6651	0.6475	0.6834
D152	M5P	6.5416	6.4114	6.7009	0.0647	0.0634	0.0655	53383	51473	54950	0.0870	0.0839	0.0894	0.6718	0.6555	0.6956
D153	DT	8.4600	8.1959	8.6746	0.0836	0.0813	0.0859	69473	67509	71042	0.1133	0.1099	0.1154	0.4450	0.4025	0.4821
D153	RF	6.0560	5.8745	6.1846	0.0595	0.0579	0.0606	48690	47331	50025	0.0794	0.0770	0.0817	0.7276	0.7113	0.7441
D153	GB	6.9856	6.7610	7.1579	0.0684	0.0664	0.0698	55047	53500	56371	0.0898	0.0878	0.0920	0.6523	0.6427	0.6652
D153	MLP	8.3692	8.1747	8.5758	0.0819	0.0801	0.0837	64968	63016	66983	0.1059	0.1033	0.1093	0.5154	0.5005	0.5339
D153	M5P	7.5633	7.3512	7.7304	0.0744	0.0722	0.0759	60723	57862	62465	0.0990	0.0949	0.1019	0.5761	0.5461	0.6090
D154	DT	7.8210	7.6121	7.9615	0.0773	0.0751	0.0788	64420	62078	65814	0.1050	0.1014	0.1072	0.5228	0.4929	0.5625
D154	RF	5.6916	5.5040	5.8777	0.0560	0.0544	0.0576	46097	44345	47201	0.0752	0.0724	0.0774	0.7555	0.7457	0.7731
D154	GB	6.1125	5.9445	6.2171	0.0600	0.0584	0.0611	48792	47214	49897	0.0796	0.0771	0.0817	0.7264	0.7115	0.7400
D154	MLP	7.0800	6.9038	7.2484	0.0691	0.0672	0.0706	55992	54080	57652	0.0913	0.0885	0.0940	0.6396	0.6278	0.6620
D154	M5P	6.6037	6.4197	6.7472	0.0652	0.0636	0.0670	54392	51477	56152	0.0887	0.0841	0.0914	0.6583	0.6374	0.6947
D155	DT	8.4525	8.2759	8.5915	0.0833	0.0814	0.0844	69186	67274	70819	0.1128	0.1098	0.1155	0.4492	0.4161	0.4872
D155	RF	6.0810	5.8645	6.2571	0.0596	0.0576	0.0612	49005	47188	50801	0.0799	0.0767	0.0826	0.7240	0.7056	0.7368
D155	GB	6.7332	6.5477	6.8947	0.0658	0.0639	0.0674	53108	51409	54586	0.0866	0.0834	0.0889	0.6762	0.6644	0.6894
D155	MLP	7.8680	7.6632	8.0233	0.0767	0.0744	0.0786	61403	59556	63412	0.1001	0.0970	0.1031	0.5670	0.5507	0.5872
D155	M5P	7.4047	7.2160	7.6650	0.0727	0.0707	0.0750	59443	56952	61554	0.0969	0.0931	0.1005	0.5939	0.5804	0.6231
D156	DT	8.0644	7.8430	8.2748	0.0798	0.0778	0.0819	66268	64552	67735	0.1081	0.1050	0.1110	0.4949	0.4617	0.5313
D156	RF	5.8084	5.6379	5.9942	0.0572	0.0557	0.0589	47177	45558	48373	0.0769	0.0745	0.0788	0.7440	0.7262	0.7634
D156	GB	6.1821	6.0303	6.2907	0.0608	0.0596	0.0621	49692	48472	51052	0.0810	0.0789	0.0827	0.7165	0.7045	0.7285
D156	MLP	6.7517	6.5109	6.9291	0.0664	0.0643	0.0681	53974	51719	55917	0.0880	0.0847	0.0909	0.6654	0.6464	0.6853
D156	M5P	6.6117	6.4242	6.7754	0.0652	0.0638	0.0669	54294	51852	55410	0.0885	0.0850	0.0904	0.6598	0.6384	0.6963
D157	DT	7.6252	7.4040	7.8423	0.0755	0.0737	0.0776	63066	60885	64786	0.1028	0.0989	0.1056	0.5421	0.5010	0.5839
D157	RF	5.5192	5.3537	5.6759	0.0544	0.0527	0.0561	45260	43463	46851	0.0738	0.0709	0.0764	0.7644	0.7522	0.7805
D157	GB	5.9744	5.7906	6.1003	0.0587	0.0573	0.0600	48136	46783	49416	0.0785	0.0765	0.0805	0.7340	0.7187	0.7466
D157	MLP	6.4111	6.2379	6.5894	0.0630	0.0611	0.0648	51673	49830	53327	0.0843	0.0811	0.0870	0.6931	0.6763	0.7109
D157	M5P	6.2968	6.1291	6.4328	0.0622	0.0603	0.0636	51402	49325	52923	0.0838	0.0808	0.0864	0.6959	0.6762	0.7210
D158	DT	7.8556	7.5297	8.0457	0.0778	0.0746	0.0793	64975	62763	66878	0.1060	0.1028	0.1091	0.5140	0.4790	0.5512
D158	RF	5.5895	5.4746	5.7411	0.0551	0.0537	0.0570	45708	43899	47266	0.0745	0.0720	0.0773	0.7597	0.7443	0.7766
D158	GB	6.0480	5.9030	6.1684	0.0594	0.0579	0.0604	48704	47594	49776	0.0794	0.0775	0.0813	0.7277	0.7148	0.7383
D158	MLP	6.7368	6.5670	6.9305	0.0662	0.0645	0.0681	53898	51762	55748	0.0879	0.0846	0.0907	0.6661	0.6471	0.6855
D158	M5P	6.4829	6.3134	6.6492	0.0640	0.0627	0.0655	53126	50984	54915	0.0866	0.0838	0.0893	0.6751	0.6450	0.7074
D159	DT	7.6851	7.4320	7.8756	0.0762	0.0742	0.0780	64057	62145	65634	0.1044	0.1017	0.1073	0.5283	0.4912	0.5613
D159	RF	5.5337	5.4247	5.6793	0.0546	0.0533	0.0563	45421	43755	46765	0.0741	0.0714	0.0765	0.7628	0.7490	0.7789
D159	GB	5.9793	5.8430	6.0999	0.0588	0.0575	0.0599	48290	47201	49522	0.0787	0.0770	0.0805	0.7323	0.7183	0.7426
D159	MLP	6.5305	6.3655	6.6807	0.0643	0.0627	0.0661	52771	50788	54532	0.0860	0.0829	0.0891	0.6799	0.6642	0.7024
D159	M5P	6.3148	6.1608	6.4439	0.0624	0.0610	0.0635	52133	50448	53577	0.0850	0.0822	0.0873	0.6870	0.6603	0.7165

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D160	DT	7.6464	7.4204	7.8337	0.0757	0.0734	0.0777	63388	61949	65063	0.1034	0.1008	0.1059	0.5377	0.4999	0.5773
D160	RF	5.4909	5.3488	5.6655	0.0542	0.0527	0.0559	45129	43772	46939	0.0736	0.0710	0.0765	0.7658	0.7530	0.7803
D160	GB	5.9131	5.7653	6.0431	0.0581	0.0567	0.0594	47778	46578	48886	0.0779	0.0757	0.0795	0.7379	0.7241	0.7459
D160	MLP	6.3090	6.1526	6.4189	0.0620	0.0602	0.0636	50947	48995	52715	0.0831	0.0801	0.0860	0.7016	0.6864	0.7226
D160	M5P	6.3028	6.1193	6.4428	0.0623	0.0604	0.0638	52133	49938	53966	0.0850	0.0815	0.0877	0.6873	0.6633	0.7065
D161	DT	7.7296	7.5392	7.9049	0.0765	0.0749	0.0780	64061	62060	65252	0.1045	0.1017	0.1064	0.5281	0.5076	0.5606
D161	RF	5.5156	5.3836	5.6564	0.0544	0.0530	0.0562	45263	43492	46728	0.0738	0.0711	0.0767	0.7644	0.7525	0.7817
D161	GB	5.9609	5.8096	6.0891	0.0586	0.0571	0.0597	48147	46914	49461	0.0785	0.0766	0.0804	0.7338	0.7193	0.7448
D161	MLP	6.4398	6.2742	6.5682	0.0634	0.0622	0.0647	52075	50052	53971	0.0849	0.0821	0.0880	0.6884	0.6770	0.7071
D161	M5P	6.3192	6.1430	6.4525	0.0625	0.0605	0.0638	52339	50266	53677	0.0853	0.0824	0.0875	0.6849	0.6663	0.7147
D162	DT	7.6372	7.4398	7.8573	0.0756	0.0740	0.0776	63297	61663	64594	0.1032	0.1004	0.1056	0.5394	0.5100	0.5734
D162	RF	5.4933	5.3413	5.6672	0.0542	0.0527	0.0559	45164	43728	46873	0.0736	0.0708	0.0764	0.7654	0.7517	0.7798
D162	GB	5.9130	5.7653	6.0431	0.0581	0.0567	0.0594	47777	46571	48886	0.0779	0.0756	0.0795	0.7379	0.7241	0.7458
D162	MLP	6.3540	6.2011	6.4615	0.0624	0.0607	0.0640	51321	49085	53532	0.0837	0.0806	0.0875	0.6972	0.6835	0.7160
D162	M5P	6.2992	6.1208	6.4358	0.0623	0.0604	0.0636	52133	49863	53851	0.0850	0.0813	0.0875	0.6873	0.6633	0.7079
D163	DT	7.6534	7.4802	7.8795	0.0758	0.0743	0.0780	63603	61225	65506	0.1037	0.1005	0.1065	0.5351	0.5037	0.5674
D163	RF	5.5048	5.3784	5.6370	0.0543	0.0530	0.0558	45215	43333	46647	0.0737	0.0710	0.0762	0.7649	0.7529	0.7816
D163	GB	5.9497	5.8228	6.0941	0.0585	0.0572	0.0596	48088	47010	49376	0.0784	0.0768	0.0803	0.7345	0.7199	0.7469
D163	MLP	6.5541	6.4048	6.6742	0.0645	0.0627	0.0662	52823	50944	54935	0.0861	0.0827	0.0895	0.6792	0.6633	0.7059
D163	M5P	6.3257	6.1447	6.4676	0.0625	0.0608	0.0642	52905	50609	54508	0.0863	0.0829	0.0889	0.6767	0.6483	0.7153
D164	DT	7.6606	7.5131	7.8326	0.0758	0.0741	0.0777	63600	61764	65491	0.1037	0.1008	0.1069	0.5348	0.4963	0.5642
D164	RF	5.4704	5.3289	5.6427	0.0540	0.0526	0.0556	44991	43122	46558	0.0734	0.0703	0.0761	0.7672	0.7526	0.7807
D164	GB	5.8663	5.7319	6.0089	0.0577	0.0564	0.0588	47464	46110	49108	0.0774	0.0756	0.0798	0.7413	0.7242	0.7515
D164	MLP	6.2841	6.1247	6.4186	0.0617	0.0600	0.0632	50791	48611	52850	0.0828	0.0794	0.0863	0.7033	0.6913	0.7246
D164	M5P	6.2372	6.0059	6.4016	0.0617	0.0597	0.0636	51502	49350	53417	0.0840	0.0802	0.0871	0.6947	0.6645	0.7228
D165	DT	7.6737	7.4863	7.8250	0.0760	0.0737	0.0776	63631	61857	65402	0.1038	0.1013	0.1066	0.5345	0.4976	0.5676
D165	RF	5.4954	5.3288	5.6524	0.0542	0.0526	0.0558	45124	43243	46784	0.0736	0.0705	0.0764	0.7659	0.7506	0.7786
D165	GB	5.9236	5.7974	6.0618	0.0582	0.0570	0.0594	47942	46588	49403	0.0782	0.0759	0.0804	0.7361	0.7218	0.7455
D165	MLP	6.4199	6.2365	6.5184	0.0630	0.0610	0.0646	51654	49317	53595	0.0842	0.0806	0.0875	0.6932	0.6829	0.7156
D165	M5P	6.3276	6.1703	6.4497	0.0625	0.0609	0.0641	51913	50313	53413	0.0847	0.0816	0.0870	0.6900	0.6692	0.7117
D166	DT	7.4785	7.2905	7.6707	0.0740	0.0723	0.0757	62154	60114	63847	0.1013	0.0983	0.1047	0.5553	0.5258	0.5896
D166	RF	5.4368	5.2846	5.6078	0.0536	0.0519	0.0551	44812	42999	46279	0.0731	0.0698	0.0756	0.7689	0.7572	0.7872
D166	GB	5.8980	5.7393	5.9940	0.0579	0.0565	0.0592	47517	46280	48699	0.0775	0.0759	0.0792	0.7407	0.7247	0.7508
D166	MLP	6.5817	6.3961	6.8103	0.0646	0.0628	0.0669	52661	50909	54604	0.0859	0.0832	0.0892	0.6812	0.6623	0.7031
D166	M5P	6.2228	6.0736	6.3559	0.0615	0.0601	0.0625	51155	49435	52592	0.0834	0.0810	0.0856	0.6988	0.6715	0.7206
D167	DT	7.5446	7.3694	7.7192	0.0746	0.0732	0.0762	62514	61056	64138	0.1019	0.0996	0.1046	0.5505	0.5306	0.5857
D167	RF	5.4384	5.2778	5.5993	0.0536	0.0520	0.0553	44816	43188	46318	0.0731	0.0700	0.0755	0.7689	0.7543	0.7868
D167	GB	5.8910	5.7344	6.0212	0.0578	0.0565	0.0591	47503	45956	48822	0.0775	0.0755	0.0795	0.7408	0.7235	0.7521

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D167	MLP	6.5128	6.2926	6.7589	0.0639	0.0617	0.0663	52208	50164	53847	0.0851	0.0818	0.0878	0.6865	0.6650	0.7115
D167	M5P	6.2413	6.0847	6.3898	0.0617	0.0602	0.0629	51491	49654	53187	0.0840	0.0813	0.0868	0.6943	0.6683	0.7240
D168	DT	7.5634	7.3836	7.7196	0.0748	0.0730	0.0764	62707	61117	64471	0.1023	0.0999	0.1048	0.5477	0.5158	0.5783
D168	RF	5.4322	5.2952	5.5806	0.0536	0.0522	0.0552	44774	42974	46267	0.0730	0.0698	0.0756	0.7693	0.7567	0.7886
D168	GB	5.8911	5.7184	6.0098	0.0578	0.0565	0.0591	47440	46192	48512	0.0774	0.0758	0.0790	0.7415	0.7256	0.7529
D168	MLP	6.5330	6.2920	6.7601	0.0642	0.0621	0.0664	52395	50347	54316	0.0854	0.0826	0.0881	0.6845	0.6663	0.7046
D168	M5P	6.2559	6.1161	6.3916	0.0618	0.0605	0.0631	51759	49971	53122	0.0844	0.0818	0.0867	0.6914	0.6637	0.7215
D169	DT	7.4990	7.3599	7.6734	0.0742	0.0728	0.0762	62333	61038	63747	0.1016	0.0998	0.1041	0.5529	0.5242	0.5811
D169	RF	5.4371	5.2946	5.6170	0.0536	0.0521	0.0550	44773	43132	46163	0.0730	0.0701	0.0754	0.7693	0.7589	0.7900
D169	GB	5.8697	5.7047	6.0085	0.0577	0.0563	0.0590	47391	45917	48903	0.0773	0.0754	0.0794	0.7421	0.7259	0.7517
D169	MLP	6.3508	6.1853	6.4794	0.0623	0.0608	0.0642	51463	49440	53433	0.0839	0.0810	0.0869	0.6956	0.6803	0.7153
D169	M5P	6.2513	6.0667	6.4026	0.0617	0.0602	0.0631	51740	49689	53481	0.0844	0.0812	0.0878	0.6916	0.6636	0.7186
D170	DT	7.5562	7.3936	7.7532	0.0748	0.0735	0.0765	62678	61466	64051	0.1022	0.1001	0.1044	0.5483	0.5127	0.5770
D170	RF	5.4372	5.3074	5.6109	0.0536	0.0523	0.0554	44779	43451	46280	0.0730	0.0705	0.0756	0.7693	0.7564	0.7869
D170	GB	5.8575	5.6942	5.9896	0.0575	0.0562	0.0588	47318	46088	48559	0.0772	0.0754	0.0789	0.7429	0.7282	0.7532
D170	MLP	6.2893	6.0934	6.4083	0.0617	0.0600	0.0630	50934	49041	52992	0.0831	0.0802	0.0861	0.7018	0.6922	0.7193
D170	M5P	6.2882	6.1115	6.4262	0.0622	0.0606	0.0633	52323	50285	53918	0.0853	0.0819	0.0880	0.6843	0.6622	0.7144
D171	DT	7.5563	7.3456	7.7577	0.0747	0.0725	0.0769	62657	61034	64229	0.1022	0.0997	0.1044	0.5484	0.5153	0.5786
D171	RF	5.4321	5.2897	5.5759	0.0536	0.0522	0.0552	44732	43180	46116	0.0729	0.0703	0.0754	0.7698	0.7587	0.7893
D171	GB	5.8592	5.7063	5.9814	0.0576	0.0563	0.0588	47312	45871	48532	0.0771	0.0754	0.0790	0.7429	0.7277	0.7525
D171	MLP	6.3024	6.1490	6.4216	0.0619	0.0605	0.0633	51141	49482	52760	0.0834	0.0806	0.0858	0.6994	0.6843	0.7188
D171	M5P	6.2894	6.1041	6.4464	0.0621	0.0608	0.0637	52358	50204	54230	0.0854	0.0822	0.0888	0.6841	0.6514	0.7169
D172	DT	7.5313	7.3758	7.7434	0.0745	0.0734	0.0763	62421	60649	64005	0.1018	0.0992	0.1042	0.5518	0.5224	0.5876
D172	RF	5.4358	5.3002	5.6171	0.0536	0.0523	0.0552	44791	43401	46298	0.0730	0.0706	0.0755	0.7692	0.7558	0.7867
D172	GB	5.8576	5.6942	5.9896	0.0575	0.0562	0.0588	47318	46102	48559	0.0772	0.0754	0.0789	0.7429	0.7282	0.7532
D172	MLP	6.3061	6.1223	6.3996	0.0618	0.0602	0.0631	51021	48946	53205	0.0832	0.0799	0.0865	0.7007	0.6873	0.7211
D172	M5P	6.2842	6.1017	6.3908	0.0621	0.0605	0.0632	52314	50163	53874	0.0853	0.0823	0.0878	0.6844	0.6621	0.7164
D173	DT	7.5613	7.4350	7.7041	0.0748	0.0735	0.0766	62845	61701	64477	0.1025	0.1008	0.1046	0.5456	0.5142	0.5797
D173	RF	5.4230	5.2814	5.5867	0.0535	0.0521	0.0549	44673	43077	46117	0.0728	0.0702	0.0751	0.7704	0.7578	0.7904
D173	GB	5.8560	5.6957	5.9902	0.0575	0.0563	0.0588	47307	45960	48641	0.0771	0.0754	0.0792	0.7430	0.7267	0.7540
D173	MLP	6.3438	6.1946	6.4624	0.0622	0.0606	0.0637	51269	49556	52973	0.0836	0.0811	0.0864	0.6978	0.6829	0.7196
D173	M5P	6.2872	6.0797	6.4534	0.0621	0.0604	0.0640	52342	50178	54091	0.0854	0.0815	0.0883	0.6840	0.6570	0.7190
D174	DT	7.5812	7.4271	7.7393	0.0750	0.0733	0.0764	63016	61672	64653	0.1028	0.1011	0.1053	0.5436	0.5158	0.5701
D174	RF	5.4311	5.2839	5.6106	0.0536	0.0521	0.0552	44744	43046	46373	0.0730	0.0700	0.0756	0.7697	0.7553	0.7851
D174	GB	5.8362	5.6660	5.9833	0.0574	0.0559	0.0588	47194	45729	48486	0.0770	0.0750	0.0791	0.7442	0.7294	0.7546
D174	MLP	6.2565	6.0896	6.4056	0.0614	0.0597	0.0627	50623	48492	52415	0.0825	0.0795	0.0855	0.7053	0.6929	0.7263
D174	M5P	6.2925	6.0979	6.4528	0.0622	0.0605	0.0640	52370	50054	54249	0.0854	0.0816	0.0885	0.6837	0.6584	0.7172
D175	DT	7.6041	7.5000	7.7995	0.0752	0.0740	0.0773	62790	61139	64511	0.1024	0.0998	0.1051	0.5467	0.5148	0.5737

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D175	RF	5.4436	5.3095	5.6237	0.0537	0.0524	0.0552	44771	43166	46085	0.0730	0.0703	0.0755	0.7694	0.7575	0.7860
D175	GB	5.8531	5.7048	5.9874	0.0575	0.0561	0.0587	47310	45899	48532	0.0771	0.0751	0.0791	0.7429	0.7287	0.7522
D175	MLP	6.3057	6.1047	6.4244	0.0618	0.0597	0.0634	50970	48856	52925	0.0831	0.0800	0.0862	0.7013	0.6904	0.7222
D175	M5P	6.2934	6.1001	6.3855	0.0621	0.0607	0.0631	52032	50154	53402	0.0848	0.0819	0.0872	0.6881	0.6702	0.7138
D176	DT	7.5260	7.3662	7.7285	0.0744	0.0727	0.0765	62333	60604	64563	0.1016	0.0984	0.1048	0.5528	0.5262	0.5829
D176	RF	5.4362	5.2854	5.5969	0.0536	0.0520	0.0553	44807	43065	46328	0.0731	0.0700	0.0754	0.7690	0.7541	0.7866
D176	GB	5.8910	5.7353	6.0212	0.0578	0.0565	0.0591	47503	45960	48822	0.0775	0.0755	0.0795	0.7408	0.7235	0.7521
D176	MLP	6.4807	6.2156	6.6747	0.0636	0.0611	0.0663	52047	49852	54086	0.0849	0.0816	0.0878	0.6884	0.6687	0.7114
D176	M5P	6.2398	6.0934	6.3883	0.0617	0.0604	0.0631	51542	49885	53067	0.0840	0.0815	0.0865	0.6937	0.6705	0.7228
D177	DT	7.5183	7.3611	7.7201	0.0744	0.0726	0.0762	62479	60526	64287	0.1019	0.0990	0.1044	0.5506	0.5288	0.5807
D177	RF	5.4272	5.2722	5.5876	0.0535	0.0521	0.0551	44725	42963	46227	0.0729	0.0697	0.0752	0.7698	0.7554	0.7880
D177	GB	5.8901	5.7272	5.9920	0.0578	0.0564	0.0591	47443	46171	48564	0.0774	0.0757	0.0790	0.7415	0.7255	0.7530
D177	MLP	6.7144	6.4599	6.9754	0.0658	0.0635	0.0679	53535	51455	55065	0.0873	0.0841	0.0898	0.6704	0.6410	0.6961
D177	M5P	6.2558	6.0768	6.4007	0.0618	0.0602	0.0632	51902	49714	53440	0.0846	0.0811	0.0871	0.6893	0.6588	0.7217
D178	DT	7.5487	7.3734	7.7383	0.0747	0.0727	0.0766	62555	60890	64210	0.1020	0.0998	0.1048	0.5499	0.5225	0.5806
D178	RF	5.4336	5.2789	5.6120	0.0536	0.0518	0.0549	44763	42898	46121	0.0730	0.0697	0.0754	0.7694	0.7540	0.7856
D178	GB	5.8701	5.7043	5.9904	0.0576	0.0563	0.0587	47314	46081	48379	0.0772	0.0752	0.0791	0.7428	0.7265	0.7547
D178	MLP	6.6110	6.3877	6.7657	0.0648	0.0627	0.0666	52697	50916	54660	0.0859	0.0830	0.0893	0.6805	0.6620	0.7063
D178	M5P	6.2334	6.0541	6.3961	0.0616	0.0598	0.0630	51527	49602	53027	0.0840	0.0806	0.0871	0.6942	0.6706	0.7237
D179	DT	7.5784	7.3812	7.7329	0.0749	0.0728	0.0768	62605	61128	64019	0.1021	0.0996	0.1046	0.5494	0.5222	0.5767
D179	RF	5.4493	5.3062	5.6076	0.0537	0.0523	0.0552	44824	42997	46371	0.0731	0.0699	0.0753	0.7688	0.7573	0.7849
D179	GB	5.8965	5.7275	6.0059	0.0579	0.0564	0.0590	47514	46248	48754	0.0775	0.0756	0.0793	0.7407	0.7249	0.7524
D179	MLP	6.6798	6.4842	6.8956	0.0654	0.0634	0.0673	53258	51297	55215	0.0868	0.0838	0.0903	0.6738	0.6479	0.7001
D179	M5P	6.2518	6.0951	6.3800	0.0617	0.0604	0.0629	51271	49479	52659	0.0836	0.0807	0.0861	0.6974	0.6775	0.7223
D180	DT	7.4750	7.2436	7.7377	0.0739	0.0718	0.0765	62092	60079	63507	0.1012	0.0983	0.1037	0.5560	0.5135	0.5945
D180	RF	5.4084	5.2505	5.5787	0.0533	0.0516	0.0550	44540	42786	46120	0.0726	0.0699	0.0751	0.7717	0.7558	0.7903
D180	GB	5.8788	5.6979	5.9979	0.0577	0.0563	0.0588	47381	46063	48682	0.0773	0.0756	0.0794	0.7421	0.7262	0.7537
D180	MLP	6.3183	6.1728	6.4676	0.0621	0.0609	0.0638	50955	49224	52827	0.0831	0.0804	0.0861	0.7016	0.6890	0.7211
D180	M5P	6.2641	6.1275	6.4408	0.0619	0.0607	0.0634	51740	49655	53495	0.0844	0.0814	0.0871	0.6919	0.6654	0.7201
D181	DT	7.4947	7.2822	7.7294	0.0741	0.0720	0.0763	62044	59720	63753	0.1012	0.0976	0.1043	0.5567	0.5275	0.5966
D181	RF	5.4195	5.2703	5.5888	0.0534	0.0519	0.0552	44618	43123	46213	0.0728	0.0700	0.0753	0.7709	0.7555	0.7866
D181	GB	5.8756	5.6879	5.9990	0.0577	0.0563	0.0590	47365	46095	48536	0.0772	0.0752	0.0796	0.7423	0.7267	0.7546
D181	MLP	6.2931	6.1362	6.4543	0.0618	0.0601	0.0635	50744	48727	52603	0.0827	0.0799	0.0856	0.7040	0.6912	0.7223
D181	M5P	6.2839	6.1243	6.4391	0.0621	0.0609	0.0637	51941	50090	53730	0.0847	0.0819	0.0874	0.6894	0.6663	0.7170
D182	DT	7.5301	7.3483	7.7109	0.0744	0.0725	0.0766	62693	61105	64120	0.1022	0.0992	0.1043	0.5474	0.5084	0.5821
D182	RF	5.4202	5.2782	5.5929	0.0534	0.0519	0.0552	44608	42847	46373	0.0727	0.0700	0.0755	0.7710	0.7551	0.7903
D182	GB	5.8799	5.6978	6.0039	0.0577	0.0563	0.0589	47363	46104	48742	0.0772	0.0757	0.0793	0.7423	0.7272	0.7546
D182	MLP	6.3184	6.1752	6.4671	0.0621	0.0605	0.0635	50903	49129	52677	0.0830	0.0799	0.0856	0.7022	0.6910	0.7217

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D182	M5P	6.3115	6.1791	6.4776	0.0623	0.0610	0.0635	52701	49899	54422	0.0859	0.0815	0.0892	0.6788	0.6550	0.7167
D183	DT	7.4722	7.2579	7.7174	0.0739	0.0718	0.0763	62100	60307	63842	0.1013	0.0987	0.1040	0.5559	0.5160	0.5983
D183	RF	5.4172	5.2895	5.5706	0.0534	0.0520	0.0550	44605	42971	46297	0.0727	0.0699	0.0752	0.7710	0.7550	0.7915
D183	GB	5.8624	5.7040	5.9840	0.0576	0.0562	0.0588	47321	46017	48575	0.0772	0.0755	0.0791	0.7428	0.7273	0.7549
D183	MLP	6.2823	6.1344	6.4327	0.0617	0.0604	0.0634	50881	48888	53020	0.0830	0.0798	0.0863	0.7024	0.6904	0.7234
D183	M5P	6.3073	6.1420	6.4298	0.0623	0.0609	0.0638	52170	50036	54074	0.0851	0.0814	0.0880	0.6868	0.6613	0.7150
D184	DT	7.5308	7.3352	7.6857	0.0745	0.0725	0.0761	62243	60882	63701	0.1015	0.0992	0.1034	0.5543	0.5248	0.5878
D184	RF	5.4308	5.2961	5.5836	0.0535	0.0523	0.0552	44696	43325	46280	0.0729	0.0703	0.0753	0.7701	0.7541	0.7867
D184	GB	5.8583	5.6922	5.9751	0.0576	0.0563	0.0587	47277	45907	48667	0.0771	0.0753	0.0792	0.7433	0.7302	0.7544
D184	MLP	6.2212	6.0877	6.3515	0.0611	0.0596	0.0625	50358	48746	52336	0.0821	0.0794	0.0852	0.7086	0.6960	0.7274
D184	M5P	6.3501	6.1799	6.5201	0.0628	0.0612	0.0645	52983	50791	54687	0.0864	0.0824	0.0896	0.6765	0.6502	0.7038
D185	DT	7.5576	7.3210	7.7700	0.0748	0.0725	0.0770	62754	61465	64402	0.1023	0.0996	0.1052	0.5465	0.5079	0.5873
D185	RF	5.4219	5.2828	5.5708	0.0534	0.0520	0.0551	44632	43026	46202	0.0728	0.0700	0.0753	0.7708	0.7546	0.7896
D185	GB	5.8582	5.6973	6.0013	0.0576	0.0562	0.0588	47275	46015	48613	0.0771	0.0754	0.0791	0.7433	0.7277	0.7548
D185	MLP	6.2479	6.0856	6.3881	0.0614	0.0599	0.0629	50622	48545	52362	0.0825	0.0795	0.0853	0.7054	0.6946	0.7240
D185	M5P	6.3602	6.2164	6.4824	0.0628	0.0610	0.0643	52949	50531	55261	0.0863	0.0821	0.0900	0.6773	0.6539	0.7105
D186	DT	7.5440	7.3022	7.6880	0.0746	0.0723	0.0762	62478	60301	63698	0.1019	0.0991	0.1041	0.5506	0.5164	0.5850
D186	RF	5.4269	5.2810	5.5929	0.0535	0.0521	0.0551	44653	43205	46266	0.0728	0.0702	0.0753	0.7706	0.7536	0.7864
D186	GB	5.8583	5.6922	5.9751	0.0576	0.0563	0.0587	47277	45907	48667	0.0771	0.0753	0.0792	0.7433	0.7302	0.7544
D186	MLP	6.2205	5.9973	6.3429	0.0611	0.0593	0.0628	50427	48450	52267	0.0822	0.0792	0.0852	0.7077	0.6935	0.7252
D186	M5P	6.3464	6.1870	6.5154	0.0627	0.0611	0.0644	52931	50422	54476	0.0863	0.0824	0.0889	0.6772	0.6550	0.7087
D187	DT	7.5111	7.2878	7.7162	0.0743	0.0720	0.0765	62474	60803	64372	0.1019	0.0993	0.1050	0.5506	0.5119	0.5886
D187	RF	5.4207	5.3028	5.5819	0.0534	0.0522	0.0549	44621	43087	46001	0.0728	0.0702	0.0751	0.7709	0.7529	0.7889
D187	GB	5.8579	5.6981	5.9805	0.0576	0.0562	0.0587	47286	45927	48667	0.0771	0.0754	0.0791	0.7432	0.7272	0.7539
D187	MLP	6.2524	6.0973	6.4223	0.0614	0.0599	0.0631	50545	48853	52476	0.0824	0.0794	0.0854	0.7063	0.6980	0.7221
D187	M5P	6.3478	6.1660	6.5233	0.0627	0.0612	0.0642	53028	50765	54720	0.0865	0.0826	0.0890	0.6760	0.6566	0.7059
D188	DT	7.5600	7.3509	7.7454	0.0748	0.0729	0.0766	62738	61222	64376	0.1023	0.0999	0.1048	0.5466	0.5029	0.5897
D188	RF	5.4303	5.2849	5.5988	0.0535	0.0520	0.0552	44711	42828	46198	0.0729	0.0701	0.0753	0.7700	0.7523	0.7837
D188	GB	5.8364	5.6698	5.9594	0.0574	0.0559	0.0586	47168	45867	48573	0.0769	0.0753	0.0791	0.7444	0.7304	0.7570
D188	MLP	6.1985	6.0621	6.2936	0.0609	0.0592	0.0621	50214	48383	52301	0.0819	0.0789	0.0849	0.7101	0.6949	0.7303
D188	M5P	6.3548	6.1786	6.4863	0.0628	0.0610	0.0644	52989	50491	54845	0.0864	0.0821	0.0893	0.6765	0.6426	0.7161
D189	DT	7.5339	7.3223	7.7331	0.0744	0.0723	0.0766	62235	60343	63736	0.1015	0.0982	0.1039	0.5542	0.5241	0.5909
D189	RF	5.4331	5.2877	5.5923	0.0535	0.0521	0.0550	44677	42999	46192	0.0729	0.0700	0.0755	0.7703	0.7550	0.7860
D189	GB	5.8579	5.6989	5.9847	0.0575	0.0562	0.0587	47268	45955	48614	0.0771	0.0753	0.0791	0.7434	0.7296	0.7558
D189	MLP	6.2203	6.0654	6.3559	0.0611	0.0593	0.0626	50313	48445	52225	0.0820	0.0793	0.0851	0.7090	0.6993	0.7278
D189	M5P	6.3635	6.1685	6.4865	0.0629	0.0609	0.0645	55617	50783	54838	0.0907	0.0825	0.0896	0.6173	0.6483	0.7053
D190	DT	7.4951	7.2580	7.7332	0.0741	0.0719	0.0765	62139	60263	63422	0.1013	0.0984	0.1036	0.5552	0.5262	0.5951
D190	RF	5.4227	5.2739	5.5902	0.0534	0.0520	0.0552	44650	43204	46190	0.0728	0.0702	0.0752	0.7706	0.7547	0.7859

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D190	GB	5.8758	5.6888	5.9990	0.0577	0.0563	0.0590	47367	46092	48536	0.0772	0.0752	0.0796	0.7423	0.7266	0.7546
D190	MLP	6.2837	6.0913	6.4511	0.0618	0.0600	0.0633	50770	48579	52863	0.0828	0.0797	0.0861	0.7037	0.6898	0.7239
D190	M5P	6.2885	6.1071	6.4538	0.0622	0.0609	0.0638	52076	49807	53915	0.0849	0.0811	0.0878	0.6878	0.6603	0.7177
D191	DT	7.5154	7.3556	7.7193	0.0743	0.0723	0.0766	62444	60716	63735	0.1018	0.0990	0.1039	0.5509	0.5200	0.5926
D191	RF	5.4150	5.2857	5.5777	0.0534	0.0520	0.0550	44594	42783	46216	0.0727	0.0701	0.0752	0.7712	0.7560	0.7883
D191	GB	5.8769	5.6958	5.9936	0.0577	0.0562	0.0589	47353	46078	48524	0.0772	0.0756	0.0792	0.7424	0.7266	0.7540
D191	MLP	6.3067	6.1688	6.4592	0.0619	0.0607	0.0634	50778	49007	52295	0.0828	0.0806	0.0854	0.7036	0.6931	0.7238
D191	M5P	6.3192	6.1467	6.4904	0.0624	0.0609	0.0640	53075	50166	54190	0.0865	0.0819	0.0882	0.6728	0.6541	0.7161
D192	DT	7.5661	7.3536	7.8047	0.0748	0.0729	0.0770	62830	61056	64321	0.1025	0.0996	0.1053	0.5456	0.5096	0.5829
D192	RF	5.4314	5.2956	5.5873	0.0535	0.0521	0.0551	44695	42787	46127	0.0729	0.0701	0.0753	0.7701	0.7536	0.7843
D192	GB	5.8594	5.7006	5.9821	0.0575	0.0562	0.0587	47234	45934	48485	0.0770	0.0751	0.0789	0.7437	0.7283	0.7548
D192	MLP	6.3039	6.1458	6.4541	0.0619	0.0605	0.0633	50719	48705	52381	0.0827	0.0796	0.0853	0.7043	0.6930	0.7240
D192	M5P	6.2826	6.0778	6.4580	0.0621	0.0606	0.0640	52067	50060	54048	0.0849	0.0818	0.0879	0.6879	0.6635	0.7180
D193	DT	7.5365	7.3331	7.7581	0.0744	0.0726	0.0767	62355	60663	63622	0.1017	0.0991	0.1038	0.5522	0.5169	0.5915
D193	RF	5.4312	5.2808	5.5840	0.0535	0.0520	0.0549	44661	42777	46249	0.0728	0.0697	0.0755	0.7705	0.7554	0.7865
D193	GB	5.8749	5.6956	5.9835	0.0577	0.0562	0.0587	47376	46130	48583	0.0773	0.0757	0.0794	0.7422	0.7277	0.7543
D193	MLP	6.2724	6.1226	6.3992	0.0616	0.0600	0.0628	50660	48455	52277	0.0826	0.0794	0.0851	0.7050	0.6939	0.7255
D193	M5P	6.2747	6.1228	6.4250	0.0620	0.0607	0.0636	51831	49714	53740	0.0845	0.0815	0.0877	0.6907	0.6631	0.7189
D194	DT	7.6356	7.4186	7.8539	0.0756	0.0736	0.0777	63173	61573	65031	0.1030	0.1002	0.1060	0.5407	0.5033	0.5807
D194	RF	5.5203	5.3644	5.6805	0.0544	0.0528	0.0562	45271	43388	46858	0.0738	0.0709	0.0764	0.7643	0.7505	0.7814
D194	GB	5.9743	5.7906	6.1003	0.0587	0.0573	0.0600	48136	46783	49416	0.0785	0.0765	0.0805	0.7340	0.7187	0.7466
D194	MLP	6.6003	6.4383	6.7684	0.0647	0.0628	0.0665	52941	50959	54448	0.0863	0.0832	0.0888	0.6776	0.6583	0.6966
D194	M5P	6.2947	6.1353	6.4477	0.0622	0.0604	0.0636	51429	49438	52854	0.0839	0.0806	0.0864	0.6956	0.6772	0.7220
D195	DT	7.9114	7.7109	8.1211	0.0783	0.0768	0.0805	65289	63472	67282	0.1065	0.1038	0.1093	0.5101	0.4835	0.5474
D195	RF	5.6248	5.4555	5.7929	0.0554	0.0538	0.0572	45913	44214	47380	0.0749	0.0719	0.0778	0.7575	0.7374	0.7753
D195	GB	6.0708	5.9308	6.1976	0.0597	0.0584	0.0609	48913	47629	50196	0.0798	0.0779	0.0814	0.7253	0.7121	0.7387
D195	MLP	6.7888	6.5562	6.9697	0.0667	0.0645	0.0685	54196	51998	55968	0.0884	0.0852	0.0911	0.6621	0.6354	0.6855
D195	M5P	6.5959	6.3992	6.7811	0.0650	0.0632	0.0667	54110	51475	55278	0.0882	0.0841	0.0900	0.6628	0.6389	0.6977
D196	DT	7.7547	7.5509	7.9892	0.0766	0.0745	0.0791	64158	62356	65877	0.1046	0.1014	0.1077	0.5265	0.4880	0.5593
D196	RF	5.5653	5.3798	5.7411	0.0548	0.0532	0.0562	45482	43780	46851	0.0742	0.0715	0.0769	0.7620	0.7473	0.7771
D196	GB	5.9741	5.8269	6.0738	0.0587	0.0573	0.0596	48056	46729	49449	0.0784	0.0763	0.0804	0.7347	0.7177	0.7465
D196	MLP	6.6197	6.4465	6.7698	0.0649	0.0631	0.0665	52793	50874	54264	0.0861	0.0833	0.0883	0.6794	0.6570	0.7008
D196	M5P	6.4375	6.2136	6.6078	0.0635	0.0615	0.0652	53006	50667	54297	0.0864	0.0828	0.0888	0.6758	0.6487	0.7119
D197	DT	7.8045	7.6359	7.9686	0.0772	0.0754	0.0789	64369	62938	66039	0.1050	0.1031	0.1073	0.5232	0.4894	0.5559
D197	RF	5.5677	5.4019	5.7194	0.0548	0.0531	0.0565	45500	43666	46957	0.0742	0.0712	0.0768	0.7619	0.7483	0.7755
D197	GB	6.0009	5.8528	6.1149	0.0589	0.0577	0.0599	48349	47214	49705	0.0788	0.0769	0.0807	0.7316	0.7171	0.7426
D197	MLP	6.7178	6.5567	6.9518	0.0658	0.0641	0.0674	53446	51549	55269	0.0871	0.0840	0.0900	0.6712	0.6574	0.6967
D197	M5P	6.4213	6.2211	6.6057	0.0633	0.0612	0.0649	52718	50515	54310	0.0860	0.0821	0.0882	0.6795	0.6558	0.7103

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D198	DT	7.6274	7.4088	7.8201	0.0754	0.0733	0.0776	63102	61111	65096	0.1029	0.0998	0.1059	0.5414	0.5018	0.5826
D198	RF	5.5156	5.3712	5.6568	0.0542	0.0528	0.0555	45095	43472	46710	0.0735	0.0709	0.0763	0.7660	0.7483	0.7821
D198	GB	5.9314	5.7703	6.0696	0.0582	0.0569	0.0593	47742	46260	49003	0.0778	0.0759	0.0799	0.7382	0.7236	0.7480
D198	MLP	6.4331	6.2569	6.5459	0.0631	0.0618	0.0643	51770	50140	53581	0.0844	0.0818	0.0872	0.6919	0.6816	0.7090
D198	M5P	6.2817	6.1574	6.4339	0.0621	0.0607	0.0635	51725	49789	53110	0.0843	0.0814	0.0867	0.6921	0.6710	0.7201
D199	DT	7.6113	7.4319	7.7367	0.0753	0.0734	0.0765	62895	61307	63992	0.1026	0.0996	0.1045	0.5445	0.5183	0.5800
D199	RF	5.4758	5.3236	5.6058	0.0539	0.0526	0.0554	44901	43404	46435	0.0732	0.0711	0.0758	0.7681	0.7496	0.7798
D199	GB	5.8939	5.7325	6.0266	0.0579	0.0566	0.0590	47496	46240	48735	0.0774	0.0756	0.0793	0.7409	0.7253	0.7508
D199	MLP	6.3191	6.1529	6.4765	0.0621	0.0605	0.0634	50866	49268	52379	0.0829	0.0807	0.0853	0.7027	0.6902	0.7197
D199	M5P	6.2796	6.1647	6.4250	0.0621	0.0609	0.0635	51878	49903	53221	0.0846	0.0819	0.0867	0.6901	0.6689	0.7206
D200	DT	7.6350	7.4482	7.8586	0.0755	0.0734	0.0776	63221	61365	65176	0.1031	0.0997	0.1063	0.5396	0.4965	0.5827
D200	RF	5.4727	5.3296	5.6228	0.0539	0.0525	0.0555	44894	43281	46591	0.0732	0.0705	0.0758	0.7681	0.7503	0.7830
D200	GB	5.9082	5.7443	6.0305	0.0580	0.0567	0.0592	47616	46240	48795	0.0776	0.0760	0.0796	0.7396	0.7247	0.7515
D200	MLP	6.3600	6.2010	6.4974	0.0624	0.0611	0.0640	51237	49665	52717	0.0835	0.0811	0.0859	0.6983	0.6806	0.7184
D200	M5P	6.2804	6.1100	6.4173	0.0620	0.0605	0.0632	52049	49975	52895	0.0849	0.0817	0.0864	0.6873	0.6715	0.7153
D201	DT	7.5591	7.2803	7.8238	0.0748	0.0720	0.0772	62846	60280	65252	0.1025	0.0988	0.1065	0.5453	0.5048	0.5789
D201	RF	5.4640	5.3495	5.6033	0.0538	0.0526	0.0553	44876	43168	46633	0.0732	0.0706	0.0758	0.7683	0.7501	0.7843
D201	GB	5.8785	5.7219	6.0153	0.0577	0.0564	0.0589	47450	46086	48625	0.0774	0.0754	0.0793	0.7414	0.7280	0.7517
D201	MLP	6.2873	6.1610	6.3776	0.0618	0.0605	0.0632	50944	49237	53016	0.0831	0.0806	0.0861	0.7019	0.6917	0.7155
D201	M5P	6.2711	6.0956	6.3916	0.0620	0.0606	0.0634	51901	49847	53829	0.0846	0.0810	0.0875	0.6900	0.6622	0.7201
D202	DT	7.6095	7.3986	7.7777	0.0752	0.0731	0.0774	62975	60915	64423	0.1027	0.0998	0.1053	0.5434	0.5091	0.5794
D202	RF	5.4624	5.3344	5.6087	0.0538	0.0525	0.0553	44862	43327	46410	0.0732	0.0709	0.0755	0.7685	0.7510	0.7809
D202	GB	5.8671	5.7023	5.9952	0.0576	0.0564	0.0589	47342	45814	48488	0.0772	0.0753	0.0788	0.7426	0.7289	0.7537
D202	MLP	6.2456	6.0763	6.3242	0.0613	0.0596	0.0625	50594	48772	52647	0.0825	0.0795	0.0857	0.7058	0.6959	0.7267
D202	M5P	6.2969	6.1048	6.4514	0.0623	0.0607	0.0639	52465	50095	54212	0.0856	0.0823	0.0889	0.6830	0.6617	0.7117
D203	DT	7.6235	7.4321	7.8047	0.0754	0.0733	0.0775	63193	61613	64807	0.1030	0.1003	0.1057	0.5403	0.5050	0.5771
D203	RF	5.4644	5.3147	5.6201	0.0538	0.0525	0.0556	44870	43137	46576	0.0732	0.0706	0.0756	0.7684	0.7495	0.7827
D203	GB	5.8798	5.7338	6.0015	0.0578	0.0564	0.0589	47467	46177	48655	0.0774	0.0754	0.0791	0.7413	0.7277	0.7515
D203	MLP	6.3002	6.1316	6.4359	0.0618	0.0605	0.0633	50985	49441	52855	0.0831	0.0806	0.0858	0.7012	0.6883	0.7200
D203	M5P	6.3102	6.1297	6.4412	0.0623	0.0607	0.0637	52306	50307	54047	0.0853	0.0813	0.0886	0.6850	0.6591	0.7160
D204	DT	7.6125	7.4180	7.7626	0.0752	0.0734	0.0767	63055	61082	64528	0.1028	0.1001	0.1054	0.5424	0.5071	0.5746
D204	RF	5.4612	5.3501	5.6087	0.0538	0.0527	0.0552	44860	43393	46374	0.0732	0.0709	0.0755	0.7685	0.7508	0.7820
D204	GB	5.8672	5.7023	5.9950	0.0576	0.0564	0.0588	47342	45806	48473	0.0772	0.0752	0.0788	0.7426	0.7289	0.7537
D204	MLP	6.2547	6.0771	6.3870	0.0614	0.0599	0.0628	50656	48719	52516	0.0826	0.0797	0.0853	0.7051	0.6922	0.7238
D204	M5P	6.2874	6.0778	6.4243	0.0622	0.0605	0.0637	52421	50139	54011	0.0855	0.0822	0.0883	0.6835	0.6626	0.7138
D205	DT	7.5931	7.3950	7.7883	0.0752	0.0732	0.0775	62999	60992	64964	0.1027	0.0996	0.1061	0.5434	0.5126	0.5751
D205	RF	5.4503	5.3119	5.6001	0.0537	0.0523	0.0554	44826	43142	46516	0.0731	0.0707	0.0758	0.7688	0.7507	0.7828
D205	GB	5.8680	5.7115	5.9803	0.0577	0.0564	0.0588	47366	45917	48637	0.0772	0.0754	0.0794	0.7423	0.7281	0.7527

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D205	MLP	6.2531	6.0941	6.3848	0.0614	0.0601	0.0625	50614	48815	52561	0.0825	0.0798	0.0854	0.7056	0.6939	0.7228
D205	M5P	6.2937	6.1019	6.4442	0.0621	0.0604	0.0639	52283	50126	54069	0.0853	0.0814	0.0888	0.6853	0.6637	0.7170
D206	DT	7.6742	7.4758	7.8727	0.0759	0.0739	0.0779	63733	61613	65698	0.1039	0.1011	0.1072	0.5325	0.5011	0.5609
D206	RF	5.4510	5.3132	5.6104	0.0537	0.0523	0.0553	44838	43011	46326	0.0731	0.0703	0.0755	0.7687	0.7507	0.7809
D206	GB	5.8389	5.6654	5.9799	0.0574	0.0559	0.0586	47210	45707	48546	0.0770	0.0749	0.0795	0.7440	0.7290	0.7563
D206	MLP	6.2324	6.0871	6.3819	0.0612	0.0596	0.0626	50434	48658	52343	0.0822	0.0796	0.0853	0.7076	0.6962	0.7255
D206	M5P	6.2977	6.1073	6.4543	0.0623	0.0606	0.0639	52444	50323	54264	0.0855	0.0816	0.0882	0.6831	0.6620	0.7148
D207	DT	7.6122	7.4234	7.7952	0.0752	0.0734	0.0771	63163	61473	64694	0.1030	0.1002	0.1054	0.5407	0.5066	0.5734
D207	RF	5.4618	5.3274	5.6160	0.0538	0.0526	0.0553	44839	43071	46309	0.0731	0.0705	0.0756	0.7687	0.7511	0.7807
D207	GB	5.8695	5.7141	5.9889	0.0577	0.0563	0.0588	47377	45961	48645	0.0773	0.0752	0.0792	0.7422	0.7284	0.7532
D207	MLP	6.2416	6.0738	6.3373	0.0612	0.0596	0.0624	50518	48846	52451	0.0824	0.0795	0.0853	0.7066	0.6950	0.7281
D207	M5P	6.3039	6.1262	6.5036	0.0623	0.0605	0.0637	52465	50415	54193	0.0856	0.0820	0.0890	0.6829	0.6634	0.7100
D208	DT	7.5896	7.3926	7.7145	0.0750	0.0728	0.0762	62629	60988	63635	0.1021	0.0992	0.1037	0.5483	0.5286	0.5805
D208	RF	5.4775	5.3156	5.6144	0.0539	0.0525	0.0554	44898	43500	46478	0.0732	0.0709	0.0757	0.7681	0.7502	0.7800
D208	GB	5.8939	5.7325	6.0272	0.0579	0.0566	0.0590	47495	46238	48726	0.0774	0.0756	0.0793	0.7409	0.7253	0.7508
D208	MLP	6.3496	6.1892	6.5093	0.0623	0.0608	0.0641	51207	49620	53009	0.0835	0.0809	0.0864	0.6986	0.6797	0.7154
D208	M5P	6.2822	6.1679	6.4390	0.0621	0.0606	0.0638	51994	50014	52997	0.0848	0.0822	0.0865	0.6887	0.6668	0.7204
D209	DT	7.5801	7.3774	7.8383	0.0750	0.0729	0.0775	62974	61155	64542	0.1027	0.0998	0.1053	0.5432	0.5106	0.5854
D209	RF	5.4740	5.3378	5.6076	0.0539	0.0525	0.0554	44925	43367	46492	0.0733	0.0706	0.0759	0.7678	0.7502	0.7828
D209	GB	5.8953	5.7324	6.0158	0.0579	0.0567	0.0591	47483	46242	48639	0.0774	0.0759	0.0791	0.7411	0.7256	0.7524
D209	MLP	6.3446	6.1450	6.5255	0.0622	0.0604	0.0640	51055	49390	52423	0.0833	0.0809	0.0856	0.7003	0.6841	0.7169
D209	M5P	6.3046	6.1269	6.5028	0.0622	0.0606	0.0641	52392	50259	53893	0.0854	0.0820	0.0881	0.6832	0.6666	0.7156
D210	DT	7.6804	7.4718	7.8824	0.0759	0.0739	0.0779	63399	62054	65218	0.1034	0.1011	0.1065	0.5376	0.5134	0.5678
D210	RF	5.4908	5.3225	5.6441	0.0540	0.0522	0.0553	45000	43468	46543	0.0734	0.0709	0.0759	0.7670	0.7504	0.7803
D210	GB	5.8908	5.7310	6.0234	0.0578	0.0564	0.0590	47460	46184	48744	0.0774	0.0753	0.0795	0.7413	0.7268	0.7529
D210	MLP	6.3660	6.1605	6.5176	0.0624	0.0609	0.0639	51230	49551	52674	0.0835	0.0813	0.0859	0.6982	0.6812	0.7158
D210	M5P	6.2932	6.1458	6.4698	0.0622	0.0610	0.0637	52077	50465	53435	0.0849	0.0822	0.0871	0.6878	0.6701	0.7152
D211	DT	7.6435	7.4434	7.8601	0.0755	0.0731	0.0775	63114	60912	64707	0.1029	0.0995	0.1059	0.5412	0.5105	0.5801
D211	RF	5.4940	5.3450	5.6421	0.0541	0.0527	0.0554	44978	43406	46389	0.0733	0.0709	0.0758	0.7673	0.7487	0.7803
D211	GB	5.9008	5.7445	6.0052	0.0579	0.0567	0.0590	47555	46320	48706	0.0775	0.0760	0.0795	0.7402	0.7260	0.7509
D211	MLP	6.3323	6.1597	6.4680	0.0621	0.0604	0.0639	51072	49378	53009	0.0833	0.0806	0.0861	0.7002	0.6820	0.7178
D211	M5P	6.2882	6.1375	6.4497	0.0621	0.0606	0.0636	51764	49968	53363	0.0844	0.0814	0.0868	0.6915	0.6632	0.7184
D212	DT	7.5200	7.2933	7.7419	0.0742	0.0721	0.0761	62352	60666	64143	0.1017	0.0986	0.1043	0.5522	0.5218	0.5773
D212	RF	5.5334	5.3824	5.6648	0.0544	0.0530	0.0556	45139	43699	46680	0.0736	0.0716	0.0764	0.7656	0.7494	0.7798
D212	GB	5.9475	5.8033	6.0665	0.0584	0.0570	0.0594	47821	46348	48854	0.0780	0.0758	0.0796	0.7373	0.7218	0.7484
D212	MLP	6.4239	6.2876	6.5647	0.0630	0.0615	0.0647	51663	49681	53269	0.0842	0.0815	0.0870	0.6933	0.6789	0.7133
D212	M5P	6.2861	6.1152	6.4275	0.0621	0.0607	0.0632	51689	49616	53429	0.0843	0.0811	0.0867	0.6924	0.6679	0.7223
D213	DT	7.5615	7.3320	7.7341	0.0748	0.0724	0.0765	62510	60829	63249	0.1019	0.0994	0.1035	0.5504	0.5290	0.5851

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D213	RF	5.4797	5.3401	5.6106	0.0539	0.0526	0.0553	44870	43345	46370	0.0732	0.0708	0.0757	0.7684	0.7495	0.7811
D213	GB	5.9048	5.7456	6.0129	0.0580	0.0567	0.0591	47537	46123	48572	0.0775	0.0756	0.0793	0.7405	0.7256	0.7518
D213	MLP	6.3683	6.1994	6.5129	0.0625	0.0609	0.0641	51246	49150	53395	0.0836	0.0801	0.0870	0.6983	0.6814	0.7222
D213	M5P	6.2489	6.0887	6.3951	0.0618	0.0605	0.0630	51589	49955	53501	0.0841	0.0815	0.0870	0.6936	0.6659	0.7219
D214	DT	7.5745	7.4090	7.7573	0.0749	0.0734	0.0764	62848	60984	64136	0.1025	0.0998	0.1047	0.5455	0.5206	0.5799
D214	RF	5.4807	5.3380	5.6255	0.0539	0.0526	0.0556	44884	43096	46450	0.0732	0.0704	0.0756	0.7682	0.7487	0.7855
D214	GB	5.9190	5.7614	6.0330	0.0581	0.0567	0.0593	47650	46273	48802	0.0777	0.0758	0.0795	0.7392	0.7234	0.7500
D214	MLP	6.4397	6.2599	6.5982	0.0632	0.0617	0.0644	51757	49663	53492	0.0844	0.0813	0.0869	0.6920	0.6772	0.7097
D214	M5P	6.2575	6.0800	6.4158	0.0618	0.0601	0.0634	51360	49579	52535	0.0837	0.0809	0.0861	0.6964	0.6675	0.7207
D215	DT	7.4851	7.3026	7.7047	0.0741	0.0720	0.0761	62294	60542	64070	0.1016	0.0987	0.1041	0.5536	0.5335	0.5751
D215	RF	5.4578	5.3504	5.5824	0.0537	0.0526	0.0553	44807	43284	46391	0.0731	0.0707	0.0757	0.7690	0.7504	0.7851
D215	GB	5.8894	5.7411	6.0223	0.0578	0.0564	0.0591	47511	46174	48578	0.0775	0.0754	0.0793	0.7408	0.7278	0.7513
D215	MLP	6.2939	6.1499	6.4230	0.0618	0.0606	0.0632	50994	49320	53287	0.0832	0.0802	0.0868	0.7012	0.6864	0.7170
D215	M5P	6.2338	6.0625	6.3561	0.0617	0.0600	0.0630	51452	49283	53289	0.0839	0.0805	0.0869	0.6953	0.6689	0.7226
D216	DT	7.6085	7.3810	7.8100	0.0753	0.0728	0.0775	62907	60932	64452	0.1026	0.0995	0.1057	0.5447	0.5169	0.5695
D216	RF	5.4608	5.3330	5.5801	0.0538	0.0528	0.0553	44809	43587	46246	0.0731	0.0711	0.0753	0.7690	0.7497	0.7830
D216	GB	5.8779	5.7319	6.0029	0.0577	0.0564	0.0589	47407	45947	48488	0.0773	0.0753	0.0790	0.7419	0.7277	0.7525
D216	MLP	6.2419	6.0998	6.3742	0.0613	0.0597	0.0628	50552	48735	52528	0.0824	0.0797	0.0855	0.7063	0.6930	0.7253
D216	M5P	6.2328	6.0615	6.3669	0.0617	0.0599	0.0631	51746	49352	53528	0.0844	0.0808	0.0875	0.6917	0.6634	0.7231
D217	DT	7.5828	7.4212	7.7229	0.0750	0.0734	0.0767	62898	61360	64517	0.1026	0.1005	0.1050	0.5449	0.5162	0.5753
D217	RF	5.4631	5.3537	5.6130	0.0538	0.0526	0.0555	44809	43177	46443	0.0731	0.0707	0.0757	0.7690	0.7513	0.7844
D217	GB	5.8864	5.7491	6.0212	0.0578	0.0565	0.0591	47480	46136	48540	0.0774	0.0755	0.0791	0.7411	0.7260	0.7514
D217	MLP	6.3104	6.1899	6.4495	0.0620	0.0607	0.0634	51116	49262	53104	0.0833	0.0808	0.0866	0.6998	0.6892	0.7170
D217	M5P	6.2687	6.1051	6.4072	0.0619	0.0603	0.0631	51641	49379	53408	0.0842	0.0803	0.0871	0.6930	0.6644	0.7192
D218	DT	7.5811	7.3827	7.7928	0.0750	0.0730	0.0773	62867	60936	64685	0.1025	0.0997	0.1053	0.5452	0.5204	0.5750
D218	RF	5.4616	5.3463	5.5866	0.0538	0.0527	0.0554	44817	43464	46355	0.0731	0.0709	0.0754	0.7690	0.7495	0.7819
D218	GB	5.8778	5.7319	6.0020	0.0577	0.0564	0.0589	47407	45947	48488	0.0773	0.0753	0.0790	0.7419	0.7277	0.7525
D218	MLP	6.2432	6.0402	6.3760	0.0613	0.0596	0.0628	50583	48599	52701	0.0825	0.0794	0.0860	0.7060	0.6946	0.7251
D218	M5P	6.2289	6.0581	6.3684	0.0616	0.0598	0.0631	51689	49187	53405	0.0843	0.0803	0.0875	0.6923	0.6637	0.7223
D219	DT	7.5910	7.4228	7.7649	0.0751	0.0735	0.0768	63006	61364	64496	0.1027	0.1003	0.1054	0.5434	0.5234	0.5748
D219	RF	5.4451	5.3055	5.5880	0.0537	0.0524	0.0554	44782	43329	46278	0.0730	0.0705	0.0754	0.7692	0.7516	0.7834
D219	GB	5.8777	5.7271	5.9983	0.0578	0.0566	0.0589	47417	46170	48542	0.0773	0.0754	0.0791	0.7418	0.7269	0.7527
D219	MLP	6.2797	6.1092	6.4391	0.0616	0.0600	0.0630	50809	48875	52423	0.0828	0.0800	0.0852	0.7032	0.6927	0.7201
D219	M5P	6.2390	6.0438	6.4239	0.0616	0.0597	0.0633	51633	49391	53375	0.0842	0.0802	0.0873	0.6925	0.6663	0.7239
D220	DT	7.5948	7.3798	7.8200	0.0751	0.0732	0.0770	62959	61625	64312	0.1027	0.1007	0.1053	0.5441	0.5075	0.5818
D220	RF	5.4465	5.2965	5.6304	0.0537	0.0522	0.0554	44757	42890	46419	0.0730	0.0700	0.0755	0.7695	0.7513	0.7826
D220	GB	5.8526	5.6917	5.9811	0.0575	0.0561	0.0587	47230	45869	48575	0.0770	0.0752	0.0792	0.7437	0.7287	0.7552
D220	MLP	6.2188	6.0810	6.3720	0.0610	0.0597	0.0627	50394	48457	52424	0.0822	0.0792	0.0853	0.7081	0.6996	0.7270

Appendix C (continued)

Dataset ID	Model	MAPE (%)			RMAE			RMSE			RRMSE			R^2		
		Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3	Mean	Q1	Q3
D220	M5P	6.2250	6.0306	6.3815	0.0616	0.0599	0.0628	51691	49028	53353	0.0843	0.0802	0.0876	0.6923	0.6730	0.7202
D221	DT	7.5630	7.3791	7.7682	0.0748	0.0731	0.0771	62755	60652	64121	0.1023	0.0988	0.1049	0.5468	0.5239	0.5833
D221	RF	5.4591	5.3295	5.6147	0.0538	0.0525	0.0553	44785	43151	46390	0.0730	0.0705	0.0756	0.7692	0.7499	0.7819
D221	GB	5.8775	5.7266	5.9970	0.0577	0.0564	0.0589	47421	45947	48558	0.0773	0.0754	0.0793	0.7417	0.7270	0.7522
D221	MLP	6.2286	6.0706	6.3756	0.0611	0.0596	0.0625	50514	48627	52294	0.0824	0.0796	0.0854	0.7067	0.6975	0.7271
D221	M5P	6.2233	6.0319	6.3645	0.0615	0.0597	0.0628	51537	49326	53275	0.0840	0.0804	0.0873	0.6943	0.6644	0.7202
D222	DT	7.5638	7.3522	7.7621	0.0748	0.0725	0.0767	62364	60294	63997	0.1017	0.0979	0.1040	0.5522	0.5251	0.5906
D222	RF	5.4820	5.3476	5.6129	0.0540	0.0526	0.0554	44881	43382	46413	0.0732	0.0709	0.0758	0.7683	0.7502	0.7816
D222	GB	5.9047	5.7456	6.0135	0.0580	0.0567	0.0591	47536	46114	48572	0.0775	0.0756	0.0793	0.7405	0.7256	0.7518
D222	MLP	6.3638	6.1794	6.4750	0.0624	0.0606	0.0637	51189	49322	52841	0.0835	0.0802	0.0861	0.6987	0.6863	0.7162
D222	M5P	6.2559	6.0854	6.3857	0.0619	0.0605	0.0632	51693	49948	53003	0.0843	0.0815	0.0859	0.6923	0.6671	0.7202
D223	DT	7.5496	7.3146	7.7811	0.0747	0.0726	0.0766	62629	61017	64009	0.1021	0.0995	0.1046	0.5483	0.5269	0.5918
D223	RF	5.4778	5.3440	5.6193	0.0539	0.0526	0.0553	44890	43414	46385	0.0732	0.0707	0.0757	0.7682	0.7504	0.7841
D223	GB	5.9106	5.7516	6.0313	0.0581	0.0568	0.0592	47553	46248	48540	0.0775	0.0760	0.0795	0.7403	0.7246	0.7508
D223	MLP	6.3817	6.1740	6.4922	0.0626	0.0609	0.0637	51259	49322	52935	0.0836	0.0803	0.0863	0.6978	0.6856	0.7197
D223	M5P	6.2586	6.0478	6.4215	0.0618	0.0601	0.0634	51491	49449	53066	0.0840	0.0808	0.0870	0.6946	0.6619	0.7236
D224	DT	7.6337	7.4227	7.8479	0.0754	0.0731	0.0772	62948	61434	64452	0.1026	0.0998	0.1059	0.5441	0.5154	0.5647
D224	RF	5.5037	5.3561	5.6578	0.0542	0.0526	0.0556	44965	43553	46549	0.0733	0.0710	0.0759	0.7674	0.7508	0.7817
D224	GB	5.9034	5.7408	6.0190	0.0580	0.0565	0.0591	47511	46335	48874	0.0775	0.0756	0.0795	0.7407	0.7265	0.7529
D224	MLP	6.4073	6.2323	6.5178	0.0628	0.0612	0.0638	51385	49510	53388	0.0838	0.0807	0.0867	0.6963	0.6856	0.7126
D224	M5P	6.2658	6.0814	6.3794	0.0619	0.0604	0.0628	51698	49644	53143	0.0843	0.0812	0.0867	0.6923	0.6719	0.7205
D225	DT	7.6240	7.4167	7.7872	0.0753	0.0732	0.0768	62995	61626	64223	0.1027	0.1009	0.1048	0.5433	0.5109	0.5830
D225	RF	5.4951	5.3567	5.6290	0.0541	0.0527	0.0554	44906	43316	46554	0.0732	0.0708	0.0762	0.7680	0.7500	0.7825
D225	GB	5.9130	5.7615	6.0364	0.0580	0.0567	0.0592	47607	46380	48845	0.0776	0.0758	0.0797	0.7397	0.7243	0.7514
D225	MLP	6.3675	6.1943	6.4947	0.0624	0.0607	0.0634	51231	49344	53235	0.0835	0.0804	0.0864	0.6982	0.6813	0.7180
D225	M5P	6.2552	6.0706	6.3810	0.0618	0.0602	0.0631	51538	49475	53070	0.0840	0.0809	0.0866	0.6942	0.6658	0.7231

Appendix D: MAPE (%) Values for Dataset–Model Combinations in Experiments 5 and 7.

Dataset ID	Experiment 5 MAPE(%)					Experiment 7 MAPE(%)				
	DT	RF	GB	MLP	M5P	DT	RF	GB	MLP	M5P
D001	22.1863	20.9302	21.0098	22.7009	21.1657	21.135	19.3965	19.6234	20.3068	21.6896
D002	18.3366	17.7243	20.6097	21.9881	20.417	17.3133	16.5595	18.8406	20.3239	18.3743
D003	18.1477	16.8747	16.6851	16.7035	16.4833	17.1503	15.8766	15.9023	15.8466	15.6995
D004	18.6827	17.3501	18.0997	18.8078	16.7555	18.1404	16.3863	16.861	17.4456	16.7983
D005	12.7783	10.1163	10.7616	9.2521	9.9378	12.3526	9.7655	10.4284	8.7043	9.7585
D006	13.0764	10.9792	12.3164	11.3695	10.982	12.408	10.6231	12.1464	10.3401	10.7401
D007	13.4906	10.7097	11.9633	10.486	10.9611	12.6588	10.2933	11.4225	11.3358	10.5073
D008	12.7651	10.9955	12.3164	12.3585	10.777	12.3507	10.6109	12.1464	11.8665	10.4338
D009	11.7552	9.0954	10.5924	8.9723	10.2163	11.7867	8.8055	10.3782	8.7081	9.9002
D010	12.1391	9.5179	10.5061	10.6504	10.376	11.4648	9.2064	10.1328	9.5011	10.9411
D011	11.4895	10.0152	10.7062	11.2331	10.798	12.8606	9.6999	10.4823	9.7349	10.2484
D012	16.7731	15.6177	16.5933	18.914	16.1577	16.3304	14.9624	15.5406	16.6751	15.854
D013	15.2965	14.2917	15.6766	16.9123	13.1513	12.8888	13.0721	15.1359	16.0253	12.3095
D014	16.8841	15.2873	17.4862	18.9942	16.4784	15.8794	13.1413	14.3158	17.5713	15.3829
D015	12.5691	10.2862	11.2145	10.3574	11.3305	11.0889	9.5679	10.6716	10.371	9.1102
D016	12.7545	10.0072	11.9854	9.6935	10.8163	10.2206	9.4498	11.8076	9.6253	10.3644
D017	12.8047	9.9615	11.4401	11.9127	12.2363	11.1641	9.1605	10.4286	10.5802	10.9343
D018	12.6453	10.0516	11.9854	12.0011	10.6632	10.4642	9.3692	11.8082	10.8992	9.9827
D019	11.9673	9.7038	10.4874	11.5292	11.6295	10.4747	8.9217	10.0173	9.8164	9.127
D020	11.8167	9.246	10.5885	10.3446	10.2793	11.3337	8.9376	10.1404	8.5799	9.3654
D021	12.3107	10.1924	11.3351	11.3796	11.1466	12.1085	9.4514	11.0427	9.3324	9.6545
D022	15.0504	14.3763	15.6766	17.3187	13.4529	13.1042	12.9947	15.1359	16.5534	12.3884
D023	16.4161	14.9499	16.2244	18.7525	15.1291	15.7604	14.2954	15.4819	17.8188	15.3686
D024	11.5199	9.6429	12.3554	15.2704	15.1154	11.2711	9.3371	12.8208	15.4914	9.8188
D025	17.2651	15.3151	16.174	17.6373	15.6139	16.5406	14.4232	15.1436	17.332	15.0272
D026	15.0882	12.1145	12.8173	12.9126	12.5741	13.6365	11.3875	12.6037	11.9192	12.0104
D027	14.9232	11.8567	14.0393	13.2766	13.6522	13.2203	11.1056	13.1164	11.2371	11.9719
D028	15.0762	11.9113	12.9235	12.6893	12.6453	13.2543	11.1666	12.6554	11.8818	12.1634
D029	14.9686	11.7676	11.5397	11.9331	14.5585	13.5	11.2976	11.7222	10.5641	11.1846
D030	15.259	11.5411	12.0073	11.3888	11.2871	12.7647	11.0204	11.9922	10.7224	12.8665
D031	14.8712	11.6632	11.3751	9.9375	14.6134	13.0379	11.0447	11.6005	10.656	12.0963
D032	15.3131	11.5744	12.0073	10.5859	11.75	12.9268	11.0075	11.9922	10.2937	13.4882
D033	14.5251	11.2657	11.2882	9.2928	13.5573	13.1893	10.8152	11.4453	10.746	10.7992
D034	14.7229	11.5455	11.2569	9.6949	12.104	12.8525	10.9824	11.1288	9.8783	11.0616
D035	14.6331	11.7505	11.892	10.5754	13.0626	13.7687	11.1992	11.664	10.9588	16.2711
D036	15.3714	11.8521	14.0393	12.5401	13.3247	13.3524	11.1146	13.1146	12.3469	11.8895
D037	14.6093	11.6837	12.7051	12.1478	11.1592	13.3664	11.0112	12.5218	11.2747	11.1235
D038	14.4394	11.953	13.4015	12.2576	12.1462	12.4502	11.1361	12.7829	11.1895	11.91
D039	14.9628	12.0132	13.3846	12.8343	13.0309	13.7198	11.3935	12.917	11.5431	14.6844
D040	14.5021	12.7523	12.8944	13.4911	12.6428	13.7063	12.2317	12.9663	12.7534	13.0791
D041	14.8586	13.159	13.0589	13.7297	13.3537	14.4543	12.5539	13.0322	13.2008	13.3412
D042	16.0548	13.1367	13.2808	13.6615	13.3855	14.7448	12.4694	13.0528	13.6329	13.7293
D043	12.0491	10.6949	11.2219	10.4798	9.4771	12.1448	10.2355	10.8862	11.2598	10.6488
D044	13.0163	10.9506	11.2652	10.4912	10.2681	12.1054	10.4677	11.1692	10.4297	13.1141
D045	13.0243	10.7985	11.1522	11.933	10.4211	11.9069	10.1622	10.7955	11.3173	10.127
D046	12.9957	10.9717	11.2652	12.3625	10.1518	11.9519	10.4725	11.2569	10.4552	12.9225
D047	12.2213	9.4498	10.2518	12.0157	9.5097	11.1857	8.9829	9.3059	9.8988	10.7246
D048	12.7886	10.0568	10.8528	10.5513	9.8216	11.9372	9.4209	10.2271	8.6802	11.5751
D049	12.3753	10.4959	10.9107	11.243	10.3	11.8338	9.9346	10.4655	10.9745	11.0119
D050	12.0483	9.6987	11.6853	12.2403	9.1578	11.3209	9.2506	10.9927	12.9947	10.0544
D051	12.4059	9.417	12.298	12.6878	10.3262	10.9458	8.8681	11.7273	12.087	12.4255
D052	11.9875	9.1437	11.6768	13.3744	9.2427	10.6896	8.5394	10.971	12.751	9.978
D053	12.4108	9.7125	10.5652	10.8411	9.0084	11.3323	9.285	10.0569	9.839	10.1377

Appendix D (continued)

Dataset ID	Experiment 5 MAPE(%)					Experiment 7 MAPE(%)				
	DT	RF	GB	MLP	M5P	DT	RF	GB	MLP	M5P
D054	12.3971	9.2795	11.0291	9.9958	9.9823	10.751	8.9014	10.0598	10.2531	12.4281
D055	12.0322	9.1354	10.2886	9.3379	9.2129	10.6464	8.6053	9.7093	10.7122	10.036
D056	12.0447	9.3197	11.0291	9.0817	9.6451	10.6549	8.8596	10.0598	10.1338	11.2176
D057	12.1418	8.9974	10.1703	9.0999	8.4983	10.5338	8.5197	9.4107	10.1502	9.937
D058	12.5266	9.3956	10.5784	9.0627	8.9556	11.3301	8.9048	10.0422	9.6676	10.4138
D059	12.2688	9.5239	10.8152	9.8917	9.7758	11.8074	9.0413	9.9524	10.058	10.7923
D060	12.1346	9.4168	12.298	13.2723	10.0545	10.2689	8.8818	11.7273	11.6378	11.2082
D061	12.2291	9.0603	11.355	12.471	8.348	10.4823	8.5111	10.6527	12.0207	9.8005
D062	11.8415	9.4547	11.9316	10.8503	8.83	11.2418	8.8703	11.1721	11.1614	10.2605
D063	12.2141	9.5903	11.975	12.581	9.9824	11.5134	9.0405	10.9222	12.0263	10.8061
D064	12.6154	10.3657	12.2776	11.6241	10.1869	13.955	9.9932	11.9717	11.5917	12.9719
D065	12.5185	9.9924	12.4559	11.5433	12.8197	13.2936	9.6706	12.2	11.6799	16.1368
D066	13.1074	9.9059	12.1693	12.3784	12.0261	12.9151	9.5624	11.7297	11.7832	15.1232
D067	13.152	10.2107	11.1421	10.2996	13.4965	13.6721	9.9686	11.0158	10.4742	12.3866
D068	12.4965	9.8915	11.4078	10.6232	12.8476	13.0071	9.5609	11.4739	11.0373	13.1588
D069	11.9942	9.7955	11.0497	11.3918	12.9132	12.6772	9.5318	10.916	10.0607	13.1781
D070	12.5903	9.8889	11.4176	11.3793	11.3557	12.9718	9.6824	11.2965	10.2913	12.2191
D071	12.7651	9.6701	10.9605	11.5847	12.4025	11.0537	9.3437	10.8753	9.9438	11.946
D072	12.397	9.8475	11.1964	9.4758	12.4805	12.6359	9.6023	10.7669	9.2989	11.3562
D073	12.709	10.1692	11.3401	11.1047	13.1575	13.3761	9.6945	11.2148	10.3522	25.1663
D074	13.3957	9.9656	12.4639	11.5731	10.8123	11.2886	9.5721	12.2023	12.2032	15.1568
D075	13.4821	9.7413	12.0039	9.9868	10.2041	13.18	9.3262	11.7981	10.8846	11.6458
D076	12.4115	10.0113	12.1144	10.74	10.6625	11.4361	9.5464	11.5127	10.7503	12.0122
D077	13.4354	10.2111	12.3024	12.3202	13.1907	13.5344	9.8573	11.8838	11.431	23.0623
D078	15.2601	13.1593	13.102	13.8687	13.517	14.1108	12.5554	13.0322	13.9732	13.6462
D079	15.3725	12.4681	12.3665	12.9871	12.744	13.3927	11.744	12.247	12.4445	14.6164
D080	14.6361	11.9888	12.3042	12.458	12.3157	13.1973	11.37	11.9336	12.7668	13.7271
D081	14.8625	12.5886	12.9716	13.3609	13.3696	13.7159	12.1609	12.7429	13.3176	13.3483
D082	14.9058	13.498	13.5247	14.1252	13.5635	14.5128	12.8528	13.701	13.4862	14.1551
D083	14.9762	13.3255	13.0612	15.0267	14.1542	14.3362	12.6744	13.0766	13.8242	13.6779
D084	16.0082	13.5532	13.5008	14.6535	13.5991	14.7279	12.8394	13.665	13.9418	15.3132
D085	13.2081	11.4819	11.322	13.1274	10.1207	12.615	11.0655	11.8485	11.4602	11.902
D086	13.2223	11.2357	11.2652	10.4692	10.9456	11.9715	10.703	11.4057	10.6544	18.35
D087	13.3497	11.171	11.3017	11.9177	10.6508	12.3176	10.5454	11.5052	11.6831	12.45
D088	13.8113	11.1797	11.2652	10.461	10.7043	11.6833	10.7397	11.5192	10.4377	16.7514
D089	13.1479	10.0821	10.4292	9.1069	10.1006	11.7048	9.5769	10.5091	11.0371	11.451
D090	13.0825	10.4293	11.0017	9.6581	10.3916	11.707	9.787	10.68	9.6886	12.4956
D091	13.0038	11.1638	11.156	9.8028	10.9144	12.2484	10.5324	11.554	10.5571	12.3607
D092	12.7286	9.8187	12.3096	12.3084	9.9505	11.4284	9.3085	12.3812	13.7135	13.7175
D093	12.2056	9.3655	12.3747	13.1466	10.8566	10.8761	8.8721	11.7976	12.4253	19.1071
D094	12.1895	9.2027	12.3043	15.2175	9.2851	10.8022	8.6055	12.1599	12.7247	12.2303
D095	12.3176	9.7953	10.6881	10.1819	10.3879	11.3302	9.3206	10.8814	10.2422	13.8809
D096	12.044	9.3564	10.9783	10.4014	10.9177	10.609	8.9857	10.7132	9.35	19.2287
D097	12.6195	9.2434	10.5136	11.5393	10.1529	10.5007	8.6865	10.6647	10.5141	12.3478
D098	12.7365	9.3299	10.9783	10.8499	10.52	10.6733	8.9582	10.7132	10.3091	17.1766
D099	12.6117	9.0524	10.4918	10.1673	9.5269	10.6917	8.6549	10.2204	10.2308	13.9328
D100	12.1327	9.4503	10.7525	10.29	9.8345	11.4279	9.0292	10.4918	9.0625	17.785
D101	12.3635	9.5847	11.2552	10.8169	10.4097	11.6046	9.0985	11.1112	9.9452	12.9106
D102	12.2735	9.3324	12.3747	14.4812	10.4941	10.9021	8.9029	11.7977	12.3191	17.0431
D103	12.3886	9.1627	12.1952	11.7334	8.6734	10.9472	8.626	12.3311	12.7319	13.7259
D104	12.5112	9.6223	12.4211	12.4995	9.2933	11.0772	8.9911	11.8756	11.3117	17.51
D105	12.4196	9.6459	12.6202	12.6863	10.4555	11.4536	9.1043	12.2027	12.601	12.8262
D106	12.6792	10.2786	12.2451	12.6449	11.7764	12.4999	9.9229	11.9816	11.6355	14.804
D107	13.2724	10.035	12.5727	12.5416	10.9192	12.8586	9.7207	12.008	11.7496	14.8868
D108	13.0519	9.9017	12.2363	12.0127	9.8874	12.8126	9.4798	12.0782	11.726	14.408

Appendix D (continued)

Dataset ID	Experiment 5 MAPE(%)					Experiment 7 MAPE(%)				
	DT	RF	GB	MLP	M5P	DT	RF	GB	MLP	M5P
D109	13.526	10.2721	11.3025	10.6928	11.5808	12.4925	10.0384	10.9691	10.3237	13.3758
D110	12.8336	9.8314	11.4351	11.5776	13.9848	11.4066	9.6565	11.3702	10.4673	11.6449
D111	12.2825	9.9518	11.152	10.5061	11.1953	11.3691	9.6548	11.0413	11.1406	12.2424
D112	13.4128	9.9004	11.4797	11.4348	14.306	13.1335	9.6295	11.3138	11.0717	15.5021
D113	12.3876	9.685	10.8722	12.1559	10.577	11.4046	9.4085	10.6071	10.5362	10.838
D114	12.5507	9.9692	11.0691	11.0024	13.0447	12.4894	9.6878	10.8383	10.0277	11.3066
D115	13.2841	10.1445	11.4477	11.5632	13.7129	12.3003	9.8382	11.442	10.8018	17.4316
D116	13.5803	9.953	12.4749	11.7489	10.7115	12.7207	9.6717	12.1303	12.069	11.2332
D117	12.2261	9.8022	11.9776	10.6087	9.1848	12.5767	9.546	11.8141	11.1581	10.5683
D118	13.206	10.0444	12.1062	10.5352	9.6693	12.8487	9.6536	11.5867	10.8523	10.8334
D119	13.5704	10.1898	12.3013	11.594	11.425	11.8845	9.8773	12.1022	11.7183	13.8566
D120	15.388	13.3248	13.0612	14.1576	14.1421	14.0091	12.6899	13.1133	13.7319	13.9229
D121	15.7299	13.1174	12.961	12.9235	13.5565	13.6463	12.2941	12.9989	13.321	14.3632
D122	14.7981	12.5294	12.5098	12.6287	13.1491	13.8813	11.8478	12.562	12.4384	14.0972
D123	15.3253	13.3305	13.4388	13.83	14.3442	14.0712	12.7805	13.8521	13.3759	14.3218
D124	15.2802	13.0651	12.642	12.6957	12.9461	14.2628	12.1599	12.5986	12.9524	14.3266
D125	14.9051	13.1087	12.8228	13.8327	12.8359	14.544	12.3613	12.6356	12.8546	15.1273
D126	15.454	13.2246	12.7481	13.2117	13.1215	13.0533	12.3971	12.7365	12.9507	13.2674
D127	13.0405	11.6419	11.5183	10.4721	11.8946	13.7177	11.1782	11.4787	10.7345	14.7844
D128	13.9574	11.5751	11.5045	10.5689	14.9166	11.5859	11.1064	11.6422	10.3927	20.4275
D129	14.4483	11.8842	11.6024	11.3468	15.4076	11.9111	11.3643	11.6729	10.7411	16.8838
D130	13.9617	11.6244	11.576	10.1826	14.836	13.4886	11.0638	11.6422	10.4887	15.0587
D131	14.5166	10.7221	11.0396	11.861	14.9831	12.4995	10.3025	10.7698	10.4769	14.0036
D132	14.1942	11.051	11.2178	10.2516	13.8943	12.9971	10.2521	10.955	8.977	10.7767
D133	13.894	11.5596	11.4739	10.7528	12.3521	11.7418	10.9908	11.6758	10.4751	16.2886
D134	15.6677	13.142	12.7281	14.0704	12.8226	13.318	12.4385	12.6947	13.3777	16.6732
D135	16.3163	12.9613	12.51	13.1181	12.5033	13.8917	11.999	12.5	12.6584	14.5064
D136	15.6847	12.6322	12.35	14.0844	12.1594	13.3225	11.804	12.1762	12.4188	16.3381
D137	14.9322	13.0492	12.667	13.8878	12.6611	13.3677	12.24	12.8305	12.5869	14.1957
D138	15.3163	12.9367	12.5778	13.0109	13.1167	13.1908	12.2775	12.4888	12.521	13.8367
D139	14.8948	13.0641	12.721	13.1931	13.3467	13.4981	12.4617	12.711	12.9099	13.3146
D140	15.7958	13.2043	12.9258	13.5962	13.5552	13.3948	12.3868	12.6553	12.7284	14.804
D141	12.6198	11.4238	11.4631	11.2933	11.4752	13.8601	11.1013	11.3072	10.1365	12.9223
D142	13.2106	11.4681	11.5302	11.1558	14.6113	13.4821	11.0388	11.7374	10.629	13.6538
D143	13.6553	11.717	11.6912	10.9629	14.6691	12.0617	11.098	11.6133	11.2192	12.9996
D144	12.9883	11.4581	11.4841	10.872	14.653	13.858	10.9328	11.4827	10.3713	14.1848
D145	13.0388	10.5708	10.9668	9.2628	14.2044	11.9936	10.1163	10.9273	11.1311	13.0309
D146	13.4842	10.9076	11.2758	8.5657	13.8864	13.5961	10.2737	11.0075	9.945	12.3645
D147	13.6423	11.3098	11.5183	10.7751	13.5502	11.8809	10.9375	11.5638	10.1028	21.762
D148	15.5942	13.0692	12.8439	13.2769	13.1234	13.5813	12.3365	12.7468	12.5904	13.3692
D149	16.2397	12.8151	12.551	12.919	12.8753	12.9513	11.9205	12.6116	12.4932	13.0816
D150	14.7518	12.5175	12.3199	12.7146	12.6619	14.166	11.7366	12.0058	11.9508	11.9767
D151	14.7448	12.9428	12.7145	13.103	13.1617	13.1486	12.293	12.617	12.397	12.4202
D152	17.9129	16.9145	16.68	17.109	16.7675	16.6756	15.8391	15.9023	16.1275	15.8323
D153	21.308	21.1838	21.1346	22.3417	20.188	21.0302	19.6813	19.6579	20.426	21.4584
D154	16.1573	14.0004	14.0111	15.3925	15.3876	15.5246	13.3107	14.103	15.3179	13.4063
D155	18.6799	18.4019	18.425	19.2751	18.9444	19.4351	17.3334	17.7429	18.1343	17.3732
D156	17.479	15.3098	15.0255	18.3098	15.2073	15.9022	14.8053	15.306	17.2502	15.6641
D157	16.2452	13.7423	13.9431	16.6161	15.7809	13.9333	13.1524	13.9344	16.1921	14.881
D158	16.1756	14.8947	15.414	17.6343	15.4332	16.4297	14.0884	15.4981	17.7089	15.1167
D159	13.2086	11.4093	11.6401	10.7631	10.8686	12.678	11.2511	12.0012	10.3421	11.7588
D160	13.7515	11.1811	11.3231	10.6869	11.6324	12.5404	10.912	11.7991	10.1568	12.3008
D161	12.4809	11.1012	11.6407	12.7151	11.0775	12.822	10.785	12.1389	11.4841	12.6239
D162	13.0601	11.2191	11.3231	12.6738	11.33	12.7134	11.041	11.7991	11.4393	11.8667
D163	12.302	9.8382	10.9714	13.1867	10.8554	12.0385	9.5687	10.9326	10.2847	10.6092

Appendix D (continued)

Dataset ID	Experiment 5 MAPE(%)					Experiment 7 MAPE(%)				
	DT	RF	GB	MLP	M5P	DT	RF	GB	MLP	M5P
D164	11.6588	10.0514	10.4858	9.3925	10.8165	11.7048	9.6744	10.3763	8.9428	26.1484
D165	13.1061	10.9079	11.1571	11.8378	11.4892	11.8345	10.6358	11.6811	9.8989	11.8933
D166	11.4959	9.5427	13.5209	17.862	10.2837	11.2691	9.0337	12.795	18.0125	11.2845
D167	11.7187	9.0956	13.145	16.2707	10.4915	10.85	8.6599	13.1129	15.5553	13.1765
D168	10.9864	8.8882	13.5107	18.0512	9.8273	10.588	8.4551	13.0812	15.9053	11.1384
D169	11.83	9.3594	10.975	10.076	10.1948	11.2027	9.031	10.7363	8.4996	11.2161
D170	11.6437	9.051	10.9497	10.5719	10.7138	10.6666	8.7029	10.8708	10.5257	13.1075
D171	10.9802	8.9071	10.9311	10.8579	10.1704	10.3304	8.5369	11.2419	10.4675	11.1839
D172	11.6565	9.0939	10.9497	10.1165	10.5072	10.8537	8.7438	10.8718	10.7894	11.1901
D173	10.9819	8.8523	10.8501	9.9604	9.2476	10.8709	8.4897	10.4086	10.3457	11.2624
D174	11.7206	9.3522	10.8202	9.8318	9.5867	10.9225	8.8633	10.5044	10.0222	12.7151
D175	11.5012	9.3219	11.102	10.5894	10.7224	11.2471	8.9803	11.2608	10.5003	10.6386
D176	11.9445	9.1067	13.145	17.9537	10.3781	10.6951	8.6787	13.1174	16.4286	11.2511
D177	11.0298	8.9833	13.3756	18.7048	9.1145	10.7964	8.532	12.663	17.3432	11.3342
D178	11.6639	9.8281	12.6471	15.5505	9.4392	11.0147	8.9295	12.8199	14.9342	12.7769
D179	11.4344	9.4345	13.5584	18.1601	10.6656	11.2191	8.9966	12.9247	16.6135	10.7591
D180	13.2817	10.5679	12.4622	12.192	11.0229	13.845	10.3708	12.1912	11.3141	12.8921
D181	12.9644	10.2698	13.5121	13.1567	12.0338	12.886	10.0802	12.7034	12.2895	14.1432
D182	13.5208	10.2543	12.5368	12.1746	11.1547	12.7459	10.0129	12.2005	12.0035	13.6202
D183	13.2881	10.45	11.1873	11.9729	13.5779	13.3443	10.3685	11.2758	10.678	12.1978
D184	13.9451	10.1496	11.2191	12.1949	11.8354	12.842	10.0636	11.4781	10.5993	15.0569
D185	13.1046	10.2364	11.0695	11.6949	13.0816	12.9769	10.1239	11.256	9.9801	13.7759
D186	13.5969	10.1101	11.2191	11.5691	12.1879	13.0265	10.0915	11.48	8.7863	15.359
D187	13.0211	9.968	10.9233	9.4817	12.692	12.4068	9.8622	11.092	9.9811	12.5027
D188	13.2336	10.2866	11.0197	10.8966	11.9792	12.4083	9.9935	11.029	9.139	13.3165
D189	13.528	10.4385	11.3609	9.9157	23.331	13.4908	10.2508	11.4541	10.5003	155.6319
D190	13.1971	10.2344	13.5121	12.7355	11.9717	12.8541	10.0481	12.7029	12.2014	13.7932
D191	12.9873	10.1685	12.4102	12.4021	9.7762	12.7975	9.9122	12.1798	11.2453	12.798
D192	13.3018	10.5166	12.9859	11.6839	10.2644	12.5009	10.0723	12.2606	11.2174	14.2496
D193	13.3104	10.5337	12.9481	12.4801	22.4585	13.4081	10.3195	12.4171	11.7488	154.4041
D194	16.1683	13.7885	13.9431	17.7405	15.7145	14.215	13.151	13.9344	16.588	14.2729
D195	17.1378	15.4434	14.9306	18.1295	15.4115	15.7297	14.5989	15.2705	17.6973	15.9389
D196	16.8563	15.2959	14.5507	14.6925	15.3916	15.4952	14.3812	14.7306	14.9574	15.8671
D197	17.5245	15.0378	14.7978	17.3271	15.8769	15.8552	14.5567	15.1624	16.9145	15.1749
D198	15.5333	13.5238	13.3732	13.4312	12.8127	14.344	12.7433	13.2241	13.307	14.7763
D199	15.7263	13.8718	13.8994	14.5875	13.1277	14.7308	13.1366	13.7394	13.3254	13.933
D200	16.1678	13.6041	13.4409	14.3018	12.9701	14.6695	12.6051	13.3719	13.1961	14.102
D201	14.0325	11.7787	11.5648	11.0391	14.1662	13.2096	11.5368	11.7035	10.072	12.515
D202	14.2046	11.6974	11.6224	10.053	13.0199	13.3552	11.5231	11.8011	10.7589	13.3644
D203	14.884	12.1302	11.7062	10.3516	14.1564	13.7563	11.8141	11.8535	10.7588	13.05
D204	14.5024	11.7895	11.6224	10.5914	13.4797	13.1161	11.539	11.8406	10.5383	13.9896
D205	14.2436	10.8126	11.0088	9.1322	13.8626	13.2685	10.6758	11.1585	10.2744	11.6956
D206	13.9766	11.098	11.1689	9.5371	12.8836	12.49	10.673	10.9522	9.258	12.8059
D207	13.4781	11.5987	11.4701	10.331	12.5977	13.0156	11.3192	11.843	10.5589	15.9921
D208	15.7903	13.8382	13.8994	14.4591	13.0202	14.9827	13.122	13.7394	13.4715	14.074
D209	15.9457	13.2808	13.0772	13.1819	12.5168	14.2201	12.4019	12.8718	12.9864	13.7516
D210	16.0155	13.6824	13.437	13.7376	12.4736	14.2519	12.6265	13.2434	12.6694	14.626
D211	15.1904	13.2269	13.5172	13.9041	12.7202	13.9621	12.4068	13.3549	12.8788	13.6071
D212	15.7781	14.0186	13.8265	13.1211	13.6846	14.8037	13.0969	13.5242	12.6047	13.8196
D213	16.478	14.5812	14.2619	14.0132	14.253	15.3524	13.5756	14.03	13.2259	14.0927
D214	16.8011	14.4204	13.8909	13.5609	14.0639	14.7659	13.2619	13.6851	13.5216	14.2578
D215	14.4897	12.5371	11.9088	10.4155	15.345	13.2319	11.9922	11.9728	11.0749	11.9802
D216	14.9802	12.6519	12.334	11.7364	13.2798	13.5457	11.9866	12.2456	10.3736	48.0234
D217	15.1438	12.9599	12.0267	11.5007	15.4534	14.0881	12.334	12.1504	9.6234	12.2165
D218	14.7821	12.6468	12.334	10.4774	13.5021	13.4616	12.0234	12.2106	9.6224	15.0237

Appendix D (continued)

Dataset ID	Experiment 5 MAPE(%)					Experiment 7 MAPE(%)				
	DT	RF	GB	MLP	M5P	DT	RF	GB	MLP	M5P
D219	14.8918	11.9059	11.6096	11.4175	14.6135	13.4098	11.2767	11.5019	9.5241	11.3794
D220	15.0499	12.0754	11.3423	9.8512	12.8913	13.0996	11.3936	11.2086	8.8784	13.1082
D221	14.9293	12.4407	11.8389	10.6518	12.9665	13.489	11.8648	12.0547	10.1153	15.0131
D222	16.2159	14.5477	14.2619	14.266	14.0312	15.0853	13.5887	14.03	13.5227	14.1276
D223	16.4696	13.7443	13.6242	12.9785	13.0602	14.5059	12.7605	13.1778	12.8002	13.6736
D224	16.2008	13.8989	13.9023	12.7606	13.226	14.6531	12.887	13.4817	12.4045	14.1929
D225	15.6578	13.6571	13.8702	12.8085	13.3966	14.7531	12.8678	13.4948	12.7242	13.1115