

Introduction

In this study, seven different models were evaluated by applying cross-validation and comparing their performance metrics including root mean squared error (RMSE), mean absolute error (MAE), and R-squared (R^2). Among the evaluated models, Random Forest and Gradient Boosting were identified as the best performing models based on their performance metrics. The hyperparameters of the selected models were then optimized to maximize their predictive power. The optimized models were then applied to predict the holdout set.