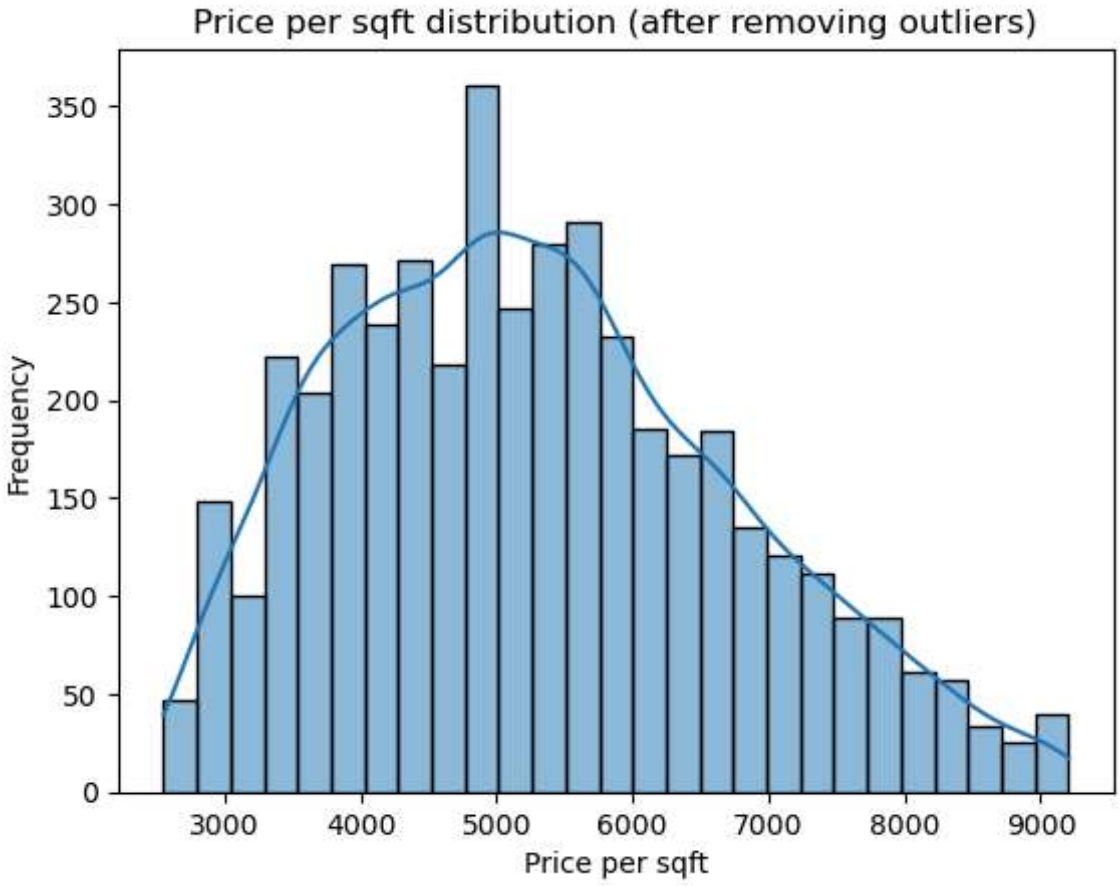
Machine Learning Project: Bangalore House Price Prediction

Introduction

An end-to-end Bangalore house price prediction project involves data collection, preprocessing, feature engineering, model selection, training, and evaluation using machine learning algorithms. The project aims to predict house prices based on factors like location, size, and amenities, ensuring accurate, reliable forecasts to aid buyers and sellers in decision-making.

Data Exploration



Modeling

Linear Regression

Explanation of Linear Regression model...

RMSE score: 1355.71

r2_score: 0.12

Random Forest Regressor

Explanation of Random Forest Regressor...

RMSE score: 1158.96

r2_score: 0.36

Model Evaluation

Comparison of the models' performances:

- RMSE Comparison: The Random Forest model has a lower RMSE (1158.96) compared to the Linear Regression model (1355.71). This indicates that the Random Forest model's predictions are, on average, closer to the actual values than those of the Linear Regression model.
- R^2 Score Comparison: The Random Forest model has a higher R^2 score (0.36) compared to the Linear Regression model (0.12). This indicates that the Random Forest model explains a higher proportion of the variance in the dependent variable than the Linear Regression model.

Conclusion

Based on the metrics results, Random Forest Regressor is a better model for this dataset.