Deep Dive Project Conclusion

Our analysis identifies two major groups of important features. First, the short-term momentum features are the strongest predictors of London house prices. The 3-month and 6-month log-price averages provide the most information, helping our model capture persistent trends within each district. These features show that prices tend to move in the same direction for several months, meaning markets rarely shift sharply without warning. Second, the lagged price features are also highly important. Last month's price strongly influences the next month's value, and the one-, two-, and three-month lags all contribute meaningful signals. These patterns suggest that London housing markets display strong inertia, with price movements evolving gradually rather than reversing suddenly.

Our two supplementary datasets add useful but smaller contributions to the model. Structural housing attributes, such as average rooms and floor area, help explain differences in baseline property value, but they have limited influence on month-to-month price changes. These features mainly distinguish expensive areas from cheaper areas, which shows that adding them to the model is meaningful for understanding overall price levels. Macroeconomic indicators show moderate but weaker importance in short-term forecasts. Earnings, demographic pressure, and population shape long-run affordability and planning, but they do not drive rapid monthly movements in housing prices.

Overall, the feature-importance results show that recent price behavior is the core driver of forecasts. Housing markets in London follow momentum and inertia rather than sudden external shocks. This supports the idea that price trends in one period affect prices in the next, both within and across districts. It also suggests that forecasting models benefit most from detailed time-series patterns rather than from static property features alone.

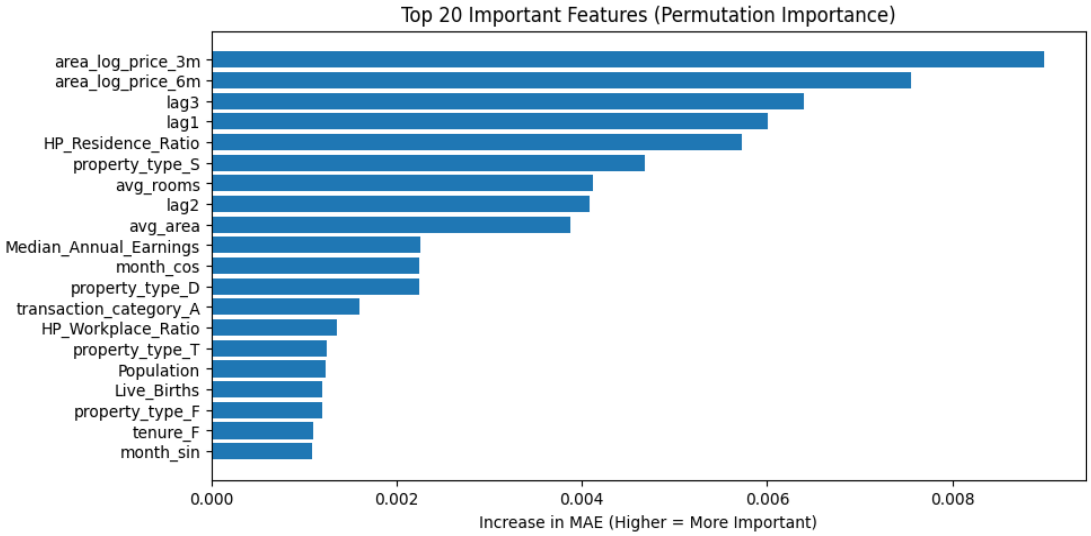

Figure.1 Top 20 Important Features