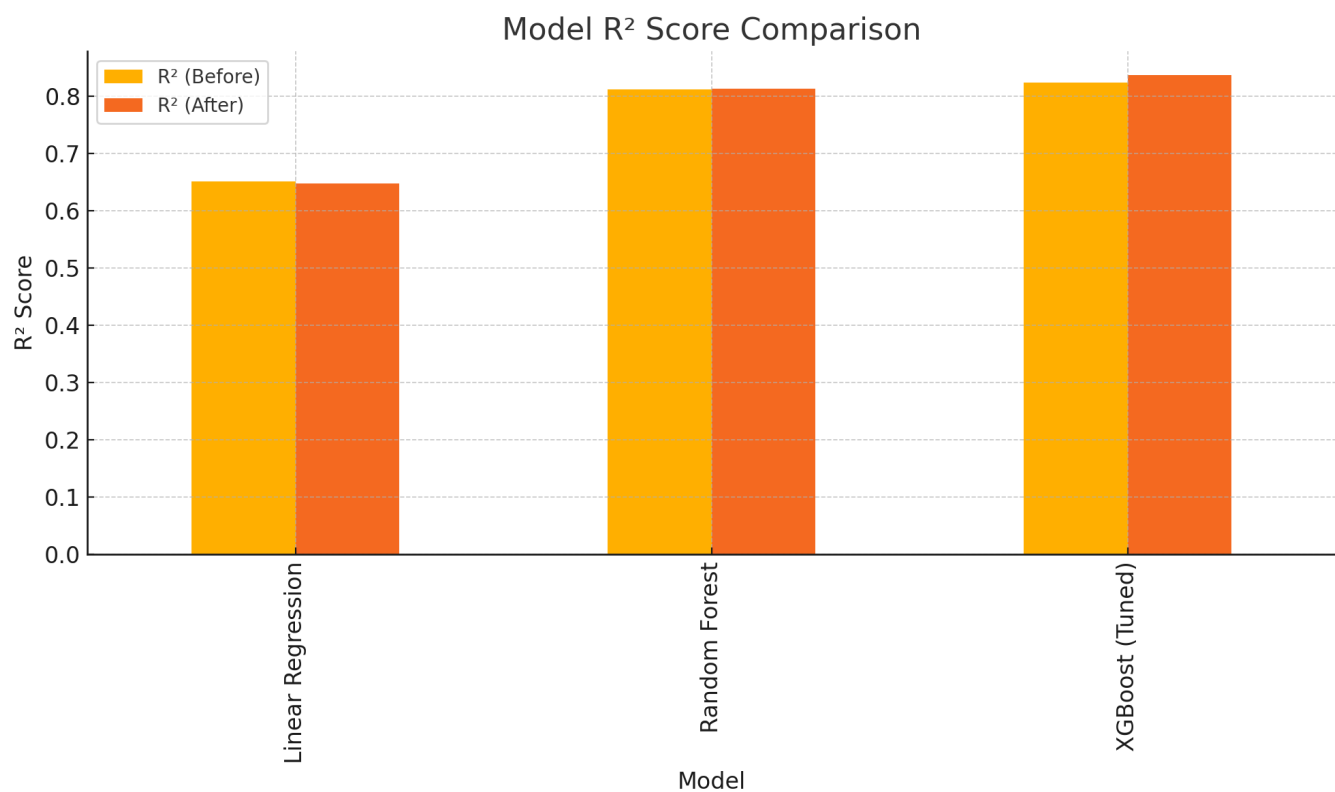


House Value Prediction Model Comparison

Executive Summary

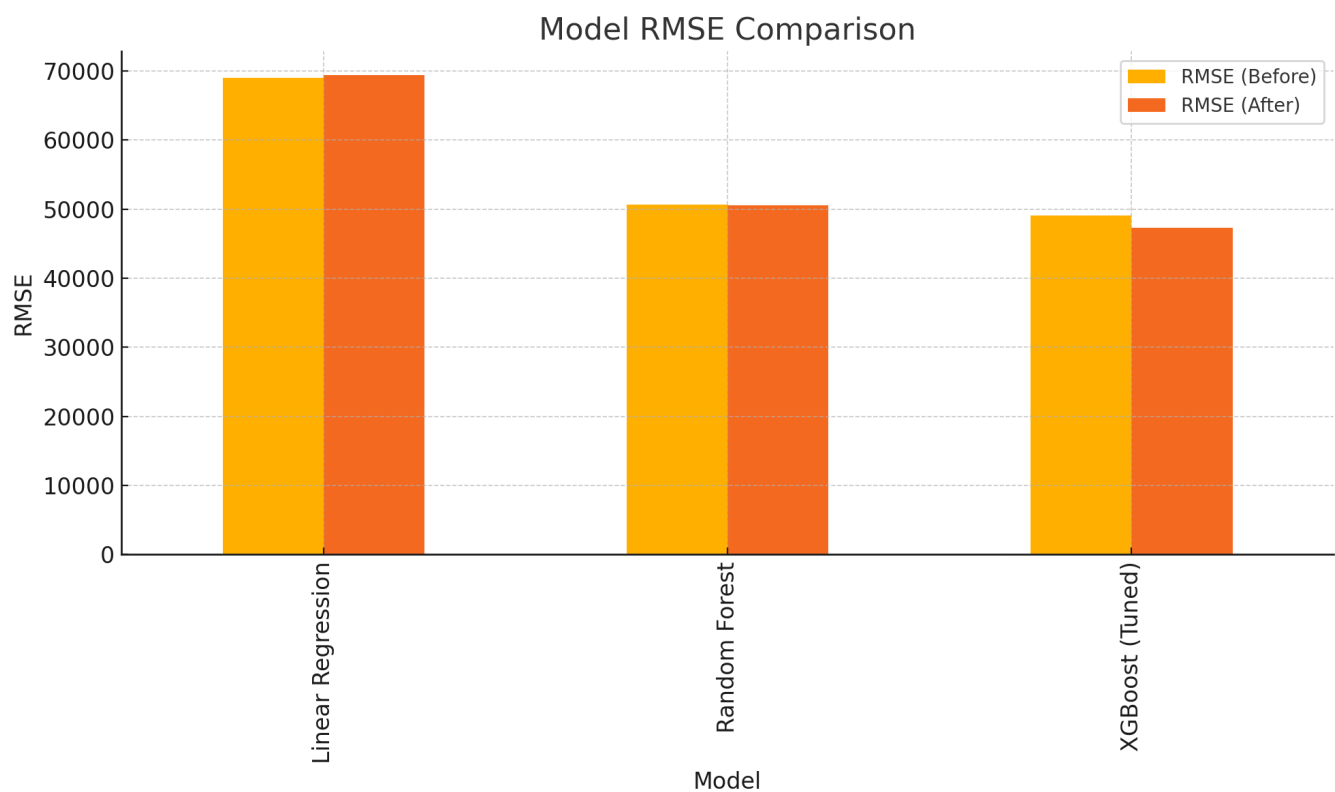
This report compares predictive performance before and after applying feature engineering, log transformations, geographic clustering, and encoding techniques to a housing dataset. Models compared include Linear Regression, Random Forest, and Tuned XGBoost.

R² Score Comparison



RMSE Comparison

House Value Prediction Model Comparison



Final Recommendation

- XGBoost (Tuned) is the best-performing model and is recommended for deployment.
- Random Forest is a strong fallback model with minimal tuning requirements.
- Polynomial Regression is discarded due to severe overfitting.
- Linear Regression remains useful for interpretability, but not optimal for accuracy.