Real Estate Price Prediction - Project Summary

This project focuses on predicting real estate prices using a combination of statistical modeling and data visualization tools. The main steps included:

1. Data Collection & Cleaning:

- Compiled real estate data including features like median income, property tax, school quality, and hospital availability.
- Cleaned and preprocessed the data for analysis.

2. Data Analysis:

- Performed Exploratory Data Analysis (EDA) to understand data distribution and correlations.
- Identified 'school_quality' and 'hospital_availability' as key factors impacting housing prices.

3. Modeling:

- Built multiple linear regression models in R.
- Improved accuracy using an interaction variable and selected the best model based on RMSE and MAE.
- Achieved final MAE: 21,451.29 and RMSE: 24,906.57.

4. Dashboard:

- Created an interactive Power BI dashboard to visualize price trends and feature impact.

5. Deployment:

- Planned integration of the R model in a Python web app using rpy2 for real-time predictions.

Conclusion:

The project demonstrates a complete workflow of data analysis, statistical modeling, and dashboard visualization, suitable for practical business insights in the real estate domain.