House Price Prediction using Linear Regression

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Objective

- Understand the basic machine learning workflow
- Build and evaluate a Linear Regression model
- Predict house prices using real-world data

Dataset

- California Housing dataset
- Provided by scikit-learn
- Contains housing-related features such as income, rooms, and location
- Target variable: Median House Value

Methodology

- Loaded and explored the dataset
- Performed data visualization (EDA)
- Split data into training and testing sets
- Trained a Linear Regression model

Model Evaluation / Results

- Model used: Linear Regression
- Mean Absolute Error (MAE): ~0.53
- Root Mean Squared Error (RMSE): ~0.75
- R^2 Score: ~0.58

Conclusion

- Linear Regression performed reasonably well as a baseline model
- The project demonstrated a complete machine learning workflow
- Model performance can be improved using advanced techniques

thank you