House Price Prediction using SVM

# 1. Project Overview

This machine learning project focuses on predicting house prices using Support Vector Machine (SVM) regression. The project involves data preprocessing, exploratory data analysis (EDA), training an SVM model, evaluating its performance, and saving the model using pickle.

# 2. Steps Involved

* 1. Data Collection and Understanding: Importing and understanding the dataset.
* 2. Data Preprocessing: Handling missing values, encoding categorical features, and transforming the date column.
* 3. Exploratory Data Analysis (EDA): Performing univariate and bivariate analysis to understand feature relationships.
* 4. Data Splitting: Splitting the data into training and testing sets.
* 5. Model Training: Using the Support Vector Machine (SVM) algorithm for regression.
* 6. Model Evaluation: Evaluating the model using metrics such as MAE, MSE, RMSE, and R² Score.
* 7. Model Saving: Saving the trained model using the pickle module for future use.

# 3. Conclusion

This project demonstrates how SVM can be used effectively for regression tasks like house price prediction. Future work may include trying different models, hyperparameter tuning, or incorporating additional data for improved accuracy.