House Price Prediction

Abstract

Real estate pricing is a crucial factor for buyers, sellers, and investors. This project aims to develop a machine learning model to predict house prices based on various factors such as location, square footage, number of bedrooms and bathrooms, neighborhood amenities, and historical sales data. The dataset is sourced from publicly available real estate databases and includes structured data such as categorical and numerical features.

The methodology involves data preprocessing, handling missing values, feature engineering, and applying machine learning algorithms such as Linear Regression, Decision Trees, and Random Forest. The model's performance is evaluated using metrics like Mean Absolute Error (MAE) and Root Mean Square Error (RMSE).

This project will assist real estate agents and buyers in making informed decisions by providing accurate price estimations based on past trends. The model can be further enhanced by integrating real-time market trends and external factors such as economic indicators and mortgage rates.