House Prices Detection Project

Overview:

This project focuses on predicting house prices using a machine learning model. Accurate prediction of house prices is a crucial task in the real estate market, which helps stakeholders make informed decisions. This project leverages various data preprocessing techniques and machine learning models to predict house prices based on historical and current market data.

Objectives:

- To clean and preprocess a dataset containing house price information.
- To explore and visualize the relationships between different features and house prices.
- To build, train, and evaluate a machine learning model for predicting house prices.
- To analyze the importance of different features in predicting house prices.

Dataset:

The dataset used in this project includes various features related to houses and their prices. Key features include interest rates, vacancy rates, adjusted prices, and adjusted values. The data is preprocessed to handle missing values, scale numerical features, and encode categorical variables.

Methodology:

1. Data Preprocessing
2. Exploratory Data Analysis
3. Feature Engineering
4. Model Building and Evaluation
5. Feature Importance Analysis
6. Visualization and Interpretation

Results:

The project successfully builds a predictive model for house prices. Key outcomes include:

- An accurate prediction model that can estimate house prices based on the provided features.

- Insights into which features are most important for predicting house prices.

- Visualizations that help understand the data and the model's performance.

Conclusion:

This project demonstrates the application of machine learning in predicting house prices. Through data preprocessing, feature engineering, and model training, we achieve a robust predictive model. The analysis highlights the importance of various features in determining house prices, providing valuable insights for real estate stakeholders.