

HOUSE PRICE PREDICTION USING MACHINE LEARNING

Problem Definition:

The problem is to predict house prices using machine learning techniques. The objective is to develop a model that accurately predicts the prices of houses based on a set of features such as location, square footage, number of bedrooms and bathrooms, and other relevant factors. This project involves data preprocessing, feature engineering, model selection, training, and evaluation.

Design Thinking:

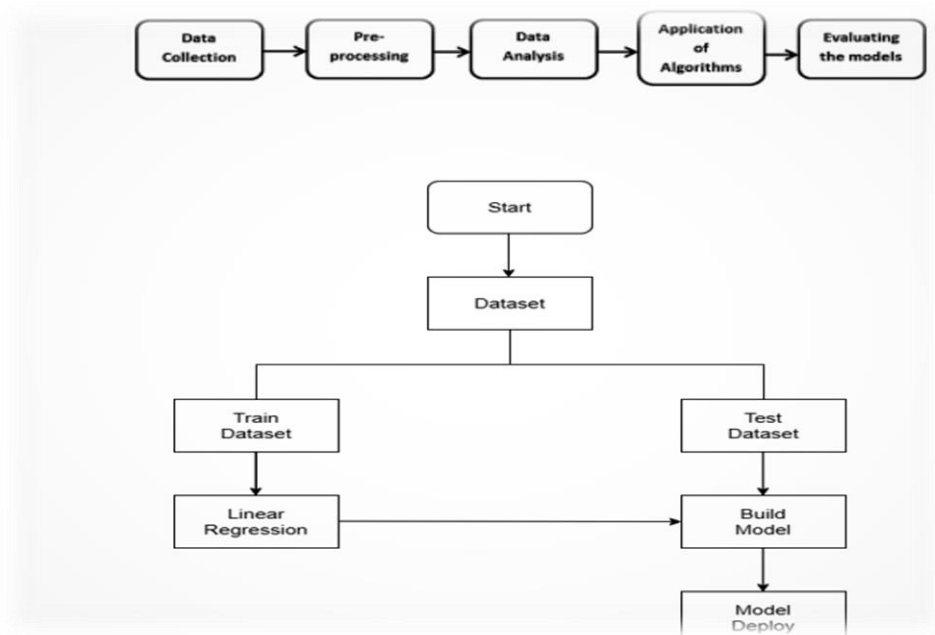
1. Data Source: Choose a dataset containing information about houses, including features like location, square footage, bedrooms, bathrooms, and price.
2. Data Preprocessing: Clean and preprocess the data, handle missing values, and convert categorical features into numerical representations.
3. Feature Selection: Select the most relevant features for predicting house prices.
4. Model Selection: Choose a suitable regression algorithm (e.g., Linear Regression, Random Forest Regressor) for predicting house prices.
5. Model Training: Train the selected model using the preprocessed data.
6. Evaluation: Evaluate the model's performance using metrics like Mean Absolute Error (MAE), Root Mean Squared Error (RMSE), and R-squared.

AIM & OBJECTIVE:

- People looking to buy a new home tend to be more conservative with their budgets and market strategies.
- This project aims to analyse various parameters like average income, average area etc. and predict the house price accordingly.
- This application will help customers to invest in an estate without approaching an agent. To provide a better and fast way of performing operations.
- To provide proper house price to the customers.
- To eliminate need of real estate agent to gain information regarding house prices. To provide best price to user without getting cheated.
- To enable user to search home as per the budget.
- The aim is to predict the efficient house pricing for real estate customers with respect to their budgets and priorities. By analyzing previous market trends and price ranges, and also upcoming developments future prices will be predicted.
- House prices increase every year, so there is a need for a system to predict house prices in the future.
- House price prediction can help the developer determine the selling price of a house and can help the customer to arrange the right time to purchase a house.

- We use linear regression algorithm in machine learning for predicting the house price trends

BLOCK DIAGRAM



FACTORS THAT AFFECT HOUSE PRICING

