Predicting House Prices using Machine Learning

Phase 1: Problem Definition and Design Thinking

In this part you will need to understand the problem statement and create a document on what have you understood and how will you proceed ahead with solving the problem .Please think on a design and present in form of a document.

Problem Definition : The problem is to predict house prices using machine learning techniquies .The objectives is to develop a model that accurately predicts the prices of house 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 ,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 revelant features of predicting house prices.
4. Model Selection: Choose a suitable regression algorithim (e.g linear Regression ,random Forest Regressor) for predicting house prices.

5. Model Training: Train the selected model using the preproccsed data .
6. Evaluation:Evaluate the model’s performance using metrics like Mean Absolute error(MAE),Root Mean Squared Error(RMSE),and R-Squared.