

## 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:

**Data Source:** Choose a dataset containing information about houses, including features like location, square footage, bedrooms, bathrooms, and price.

**Data Preprocessing:** Clean and preprocess the data, handle missing values, and convert categorical features into numerical representations.

**Feature Selection:** Select the most relevant features for predicting house prices.

**Model Selection:** Choose a suitable regression algorithm (e.g., Linear Regression, Random Forest Regressor) for predicting house prices.

**Model Training:** Train the selected model using the preprocessed data.

**Evaluation:** Evaluate the model's performance using metrics like Mean Absolute Error (MAE), Root Mean Squared Error (RMSE), and R-squared.