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BSCS-3B

1. Introduction

The purpose of this project was to create a simple model which can predict house prices from the details: footage size, bedrooms number, age and distance away downtown. With the goal of helping real estate agents faster and easier estimation about house prices.

2. Dataset Overview

The following is the information of a house in dataset

Size (sq. ft.): The area of the house.
Room: number of rooms in the house.
age: the age of house in years
Size to Downtown (miles): This shows the house size from main city.
Price — The price at which the house actually sold (this is what we are trying to predict).

3. Data Preprocessing

Before creating the model, we prepared our data.

Missing Values: Fortunately, no variable contains missing value.

Scaler: On which our size and age features were in different ranges hence was needed to be scaled for better performance of the model,

4. Model Development

5. Model Assessment

To assess the model's performance, we made use of:

The Mean Squared Error (MSE) indicates the degree to which the actual prices differed from the predictions. More accuracy is indicated by a lower MSE.

R-squared: This indicates how effectively the model accounts for the fluctuations in home values. To see how close the predicted and actual prices were, we also plotted them against each other.

6. Results

Size: A house's price increases with its size.

Houses located closer to the downtown area are typically less expensive.

Age and bedrooms had an effect as well, but they weren't as significant as proximity and size.

7. In summary

Based on the available features, the model was ultimately able to predict house prices fairly well. Although it did fairly well, the accuracy could be increased by including more information (such as neighborhood characteristics or crime rates). Multiple regression can be used to estimate house prices in practical applications, as demonstrated by this straightforward model.