House Price Predictions Case Study (Predictive Modeling in Python)

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Introduction to the Case Study

A real estate company operating in the Delhi region has a dataset containing property prices and various factors influencing these prices. The company aims to leverage this data to optimize property pricing strategies by identifying key variables that impact property values. These factors include aspects such as the area of the property, the number of bedrooms, the number of bathrooms, parking spaces, and other relevant features.

The primary objective is to identify and analyze the variables that most significantly affect house prices. The company intends to create a linear model that quantitatively establishes the relationship between house prices and these variables, providing insights into how each factor contributes to the price. This model will allow the company to assess the importance of different features in determining property values.

Objectives And Questions

Case Study Objective

1. Predict the House Prices based on the given parameters such as Location, Bedrooms, Areas etc etc from the data set.

Questions

1. Perform Data Cleaning and Transformation
2. Prepare the Data by Normalising (converting Text value to numeric)
3. Perform Exploratory data Analysis
4. Perform Correlation analysis to find out the relation between variables
5. Train the Multiple Linear Regression Model and Predict the House Prices

Dataset Description

Column	Description
Price	The cost or price of the property for sale or rent.
Area	The total size of the property, typically measured in square feet or square meters.
Bedrooms	The number of bedrooms in the property.
Bathrooms	The number of bathrooms in the property.
Stories	The number of floors or levels in the property.
Mainroad	Indicates whether the property is located on or near a main road (yes/no).
Guestroom	Indicates if the property has a guestroom (yes/no).
Basement	Indicates if the property has a basement (yes/no).
Hotwaterheating	Indicates if the property has hot water heating (yes/no).
Airconditioning	Indicates if the property has air conditioning (yes/no).
Parking	Indicates if the property has parking available (yes/no).
Prefarea	Indicates if the property is located in a preferred area (yes/no).
Furnishingstatus	The status of the property's furnishing (e.g., furnished, unfurnished, semi-furnished).

Thank you

Written by