HOUSE PRICE PREDICTION

By

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INTRODUCTION:

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. There are three factors that influence the price of a house which include physical conditions, concept and location.

PROBLEM STATEMENT:

- This work considers the issue of changing house price as a classification problem and discuss machine learning techniques to predict whether house prices will rise or fall using available data.

- The focus is to create an "easy to use" website, which will allow a first time customer to complete their needs with ease.

DATASET:

BHK	Rent	Size	Floor	Area Type	Area Locality	City	Furnishing Status	Tenant Preferred	Bathroom	Point of Contact
2	10000	1100	Ground out of 2	Super Area	Bandel	Kolkata	Unfurnished	Bachelors/Family	2	Contact Owner
2	20000	800	1 out of 3	Super Area	Phool Bagan, Kankurgachi	Kolkata	Semi-Furnished	Bachelors/Family	1	Contact Owner
2	17000	1000	1 out of 3	Super Area	Salt Lake City Sector 2	Kolkata	Semi-Furnished	Bachelors/Family	1	Contact Owner
2	10000	800	1 out of 2	Super Area	Dumdum Park	Kolkata	Unfurnished	Bachelors/Family	1	Contact Owner
2	7500	850	1 out of 2	Carpet Area	South Dum Dum	Kolkata	Unfurnished	Bachelors	1	Contact Owner
2	7000	600	Ground out of 1	Super Area	Thakurpukur	Kolkata	Unfurnished	Bachelors/Family	2	Contact Owner
2	10000	700	Ground out of 4	Super Area	Malancha	Kolkata	Unfurnished	Bachelors	2	Contact Agent
1	5000	250	1 out of 2	Super Area	Malancha	Kolkata	Unfurnished	Bachelors	1	Contact Agent
2	26000	800	1 out of 2	Carpet Area	Palm Avenue Kolkata, Ballygunge	Kolkata	Unfurnished	Bachelors	2	Contact Agent

EXPLORATORY DATA ANALYSIS:

The output of the **df.info**() method can be helpful for understanding the structure of the Data Frame and the data types of the columns.

This information can be useful for performing data analysis and visualization.

```
lass 'pandas.core.frame.DataFrame'>
ngeIndex: 4746 entries, 0 to 4745
ta columns (total 12 columns):
    Column                Non-Null Count   Dty
    ------                --------------   ---
    Posted On             4746 non-null    obj
    BHK                   4746 non-null    int
    Rent                  4746 non-null    int
    Size                  4746 non-null    int
    Floor                 4746 non-null    obj
    Area Type             4746 non-null    obj
    Area Locality         4746 non-null    obj
    City                  4746 non-null    ob
    Furnishing Status     4746 non-null    ob
    Tenant Preferred      4746 non-null    ob
0   Bathroom              4746 non-null    in
1   Point of Contact      4746 non-null    ob
ypes: int64(4), object(8)
mory usage: 445.1+ KB
```

AIM AND IMPORTANCE:

These are the Parameters on which we will evaluate ourselves-

• Create an effective price prediction model

• Validate the model's prediction accuracy

• Identify the important home price attributes   which feed the model's predictive power.

LINEAR REGRESSION:

- Linear regression is an algorithm used to predict values that are continuous in nature.
- Linear Regression is a machine learning algorithm based on supervised learning. • It performs a regression task.
- Regression models a target prediction value based on independent variables.
- It is mostly used for finding out the relationship between variables and forecasting

CONCLUSION:

So, our Aim is achieved as we have
successfully ticked all our parameters as
mentioned in
our Aim Column. It is seen that circle rate is
the most effective attribute in predicting
the
house price and that the Linear Regression
is the most effective model for our Dataset
with
RMSE score of 0.872424496906353