

Predicting House Prices using Machine Learning

Problem Statement:

The real estate market is a vital part of the economy, and buying or selling a house is a significant financial decision for individuals and families. Accurate prediction of house prices is essential for both buyers and sellers to make informed decisions. However, determining the fair market value of a house involves analyzing a myriad of factors, including location, size, number of bedrooms, amenities, and more. This complexity makes it challenging to manually estimate house prices, creating a need for automated and data-driven solutions.

For Given Data Set (importing of data_set and preprocessing it)

STEPS:

1. Preparing the python Environment:

We start by setting up the Python environment and loading the Pandas library, which is essential for data organization.

2. Loading the Data_Set:

The code reads the dataset from a CSV file. To make this work for your specific case, you'll need to provide the path to your CSV file within the code.

3. Creating Separate Lists (data preprocceasing):

After loading the data, we create separate lists for each column. These lists are like containers that hold the values

from the different columns in the dataset. Each list is associated with one of the attributes in the dataset.

PROGRAM:

```
import pandas as pd
```

```
data = pd.read_csv("USA_Housing.csv")
```

```
avg_area_income = data['Avg. Area Income'].tolist()
```

```
avg_area_house_age = data['Avg. Area House Age'].tolist()
```

```
avg_area_number_of_rooms = data['Avg. Area Number of  
Rooms'].tolist()
```

```
avg_area_number_of_bedrooms = data['Avg. Area Number of  
Bedrooms'].tolist()
```

```
area_population = data['Area Population'].tolist()
```

```
price = data['Price'].tolist()
```

```
address = data['Address'].tolist()
```

Conclusion:

By using the above python program to import a CSV data_set file and preprocessing it for future use, a machine learning solution for predicting house prices can be developed and refined to provide valuable insights and support decision-making in the real estate industry.