Siddartha Narra

Machine Learning with Python Assessment

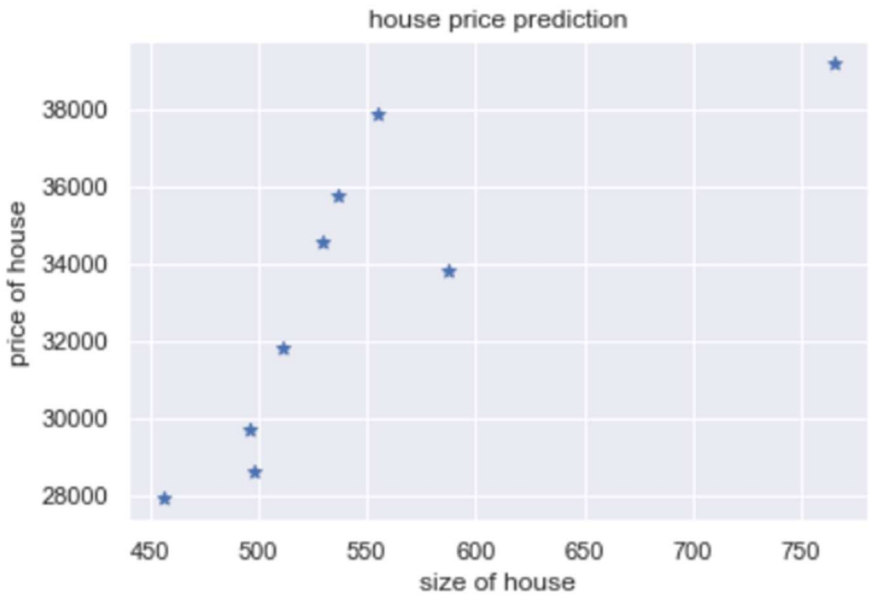
TITLE: To predict price of house depending upon the size of house

Python code:

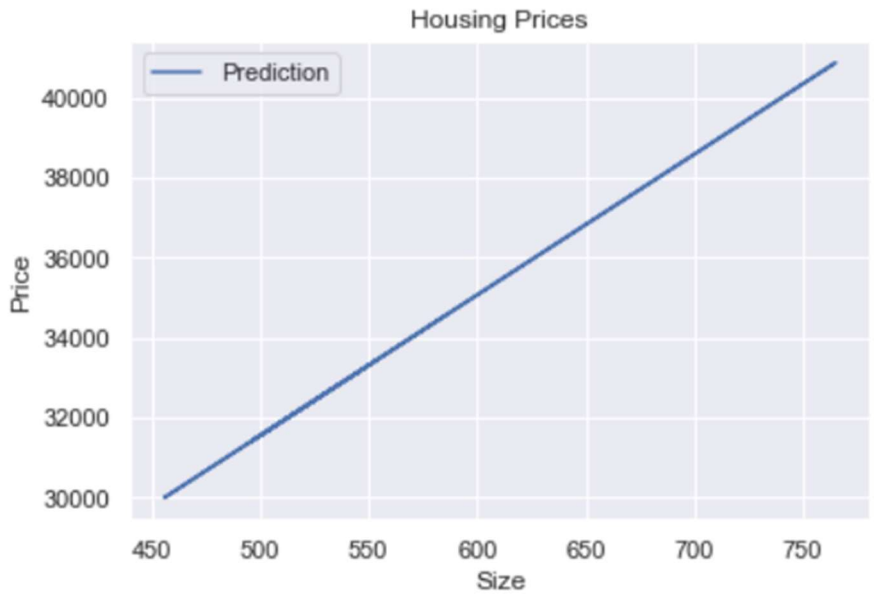
```
# import the libraries:
import numpy
import pandas as pd
import matplotlib.pyplot as vis
from sklearn.linear_model import LinearRegression


# training data set to train the model:

tab = {
  "SIZE(X-feature)": [587,496,765,456,530,555,498,511,537],
  "PRICE(Y-target)": [33800,29700,39223,27908,34576,37867,28647,31799,35768]
}

asd = pd.DataFrame(tab)

print(asd)
```

	SIZE(X-feature)	PRICE(Y-target)
0	587	33800
1	496	29700
2	765	39223
3	456	27908
4	530	34576
5	555	37867
6	498	28647
7	511	31799
8	537	35768

```
# visualisation:
vis.scatter(ip,op,marker='*')
vis.title('house price prediction')
vis.xlabel('size of house')
vis.ylabel('price of house')
```



```
# here ip is the independent variable and op is dependent variable

ip=asd['SIZE(X-feature)']

op=asd['PRICE(Y-target)']


# transforming size column(from table) to matrix

ip_m=ip.values.reshape(-1,1)


# regression

func=LinearRegression()

func.fit(ip_m,op)




# final visualisation:

n=len(ip)
y=[]

#convert matrix to array
x = numpy.asarray(ip_m).ravel()
for i in x:
   y.append(func.predict([[i]]))



vis.plot(x,y,label='Prediction')

# Set the title
plt.title("Housing Prices")

# Set the y-axis label
plt.ylabel('Price')

# Set the x-axis label
plt.xlabel('Size')

plt.legend()
plt.show()
```




```
# predicting the price
k=int(input("size of the house: "))
print("price of the house:", func.predict([[k]]))
```

ouput(price):

size of the house: 500
price of the house: [31552.5088435]