




25-09-2021

ARTIFICIAL INTELLIGENCE
PRACTICAL 6
ROLL No. 2109805

NAME: JAGRUT GALA
CLASS: TYBSc CS
ROLL No: 2109805
SUBJECT: ARTIFICIAL INTELLIGENCE



Practical 6: Linear Regression

Q1) Predict the price of a house using Linear Regression.

Ans:

[p6_linear_regression.py](#)

```
"""
```

```
p6_linear_regression.py
```

```
Author: Jagrut Gala
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Date: 28-08-2021
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Practical: 6
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```
Objective: Predict the price of a house using Linear Regression.
```

```
"""
```

```
import matplotlib.pyplot as plt
```

```
import numpy as np
```

```
from sklearn import datasets, linear_model
```

```
import pandas as pd
```

```
import io
```

```
from pathlib import Path
```

```
p= Path(__file__).parent/ "Housing.xlsx"
```

```
fio= io.open(p, "rb")
```

```
df = pd.read_excel(fio)
```

```
print(df)
```

```
Y = np.array(df['price']).reshape(1, -1)
```

```
X = np.array(df['tsft']).reshape(1, -1)
```

```
# print(f"Shapes: {X.shape} {Y.shape}")
```

```
# # Plot outputs
```

```
plt.scatter(X, Y)
```

```
plt.title('Test Data')
```

```
plt.xlabel('Size')
```

```
plt.ylabel('Price')
```

```
plt.xticks(())
```

```
plt.yticks(())
```

```
# # Create linear regression object
```

```
regr = linear_model.LinearRegression()
```

```
# # Train the model using the training sets
```

```
regr.fit(X, Y)
```

```
# # Plot outputs
```

```
plt.plot(X, regr.predict(X), color='red',linewidth=3)
```

```
plt.show()
```

```
(ai) C:\MyStuff\College Stuff\SEM V\Artificial Intelligence\Practicals\practical_6>py p6_linear_regression.py
price  tsft
0  5000000  800
1  6000000  900
2  7000000  1000
3  8000000  1100
4  9000000  1200
5  10000000 1300
6  11000000 1400
7  12000000 1500
8  13000000 1600
9  14000000 1700
```

