

Source code:

```
2 """
3 Created on Fri Mar 27 00:34:36 2020
4
5 @author: Mominah Baig
6 """
7
8 #simple linear regression
9 import numpy as np
10 import matplotlib.pyplot as plt
11 import pandas as pd
12 #importing the dataset of brain weight and head size
13 dataset = pd.read_csv('dataset.csv')
14 A = dataset.iloc[:, 2:3].values
15 B = dataset.iloc[:, 3].values
16 #splitting the dataset into training and test set with the ratio of 4:1
17 from sklearn.model_selection import train_test_split
18 A_train, A_test, B_train, B_test = train_test_split(A,B, test_size=0.2)
19 #fitting simple linear regression to the training set
20 from sklearn.linear_model import LinearRegression
21 regressor = LinearRegression()
22 #to train the model
23 regressor.fit(A_train,B_train)
24 #predicting the test set results
25 B_pred=regressor.predict(A_test)
26 #plotting training set
27 plt.scatter(A_train, B_train, color='blue')
28 plt.plot(A_train, regressor.predict(A_train), color='orange')
29 plt.title('Head Size(cm^3) Vs. Brain Weight(grams)')
30 plt.xlabel('Head Size(cm^3)')
31 plt.ylabel('Brain Weight(grams)')
32 plt.show()
33 #plotting Test set results
34 plt.scatter(A_test, B_test, color= 'blue')
35 plt.plot(A_train, regressor.predict(A_train), color='orange')
36 plt.title('Head Size(cm^3) Vs. Brain Weight(grams)')
37 plt.xlabel('Head Size(cm^3)')
38 plt.ylabel('Brain Weight(grams)')
39 plt.show()
```

Variable Explorer:

Name	Type	Size	Value
A	int64	(237, 1)	[[4512] [3738]
A_test	int64	(48, 1)	[[3391] [3214]
A_train	int64	(189, 1)	[[3566] [3850]
B	int64	(237,)	[1530 1297 1335 ... 1104 1170 1120]
B_pred	float64	(48,)	[1222.41363842 1176.55932191 1192.88034982 ... 1266.45450738 1248.0609 ...]
B_test	int64	(48,)	[1120 1110 1105 ... 1127 1132 1165]
B_train	int64	(189,)	[1306 1412 1275 ... 1222 1440 1287]
dataset	DataFrame	(237, 4)	Column names: Gender, Age Range, Head Size(cm^3), Brain Weight(grams)

A= Head Size, B= Brain Weight

A - NumPy array		B - NumPy array	
	0		0
0	4512	0	1530
1	3738	1	1297
2	4261	2	1335
3	3777	3	1282
4	4177	4	1590
5	3585	5	1300
6	3785	6	1400
7	3559	7	1255
8	3613	8	1355
9	3982	9	1375
10	3443	10	1340
11	3993	11	1380
12	3640	12	1355

Output:

