CODE:

Editor - C:\Users\Ali\Desktop\Machine Learning\1 - Simple Linear Regression\New folder\simple_linear_regression.py

temp.py | simple_linear_regression.py

```
 2
 3 # Importing the libraries
 4 import numpy as np
 5 import matplotlib.pyplot as plt
 6 import pandas as pd
 7
 8 # Importing the dataset
 9 dataset = pd.read_csv('dataset.csv')
10 X = dataset.iloc[:, 2:3].values
11 y = dataset.iloc[:, 3].values
12
13 # Splitting the dataset into the Training set and Test set
14 from sklearn.model_selection import train_test_split
15 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 1/3, random_state = 0)
16
17 # Fitting Simple Linear Regression to the Training set
18 from sklearn.linear_model import LinearRegression
19 regressor = LinearRegression()
20 regressor.fit(X_train, y_train)
21
22 # Predicting the Test set results
23 y_pred = regressor.predict(X_test)
24
25 # Visualising the Training set results
26 plt.scatter(X_train, y_train, color = 'green')
27 plt.plot(X_train, regressor.predict(X_train), color = 'red')
28 plt.title('Graph between head size and brain weight(Training set)')
29 plt.xlabel('Head Size')
30 plt.ylabel('Brain Weight')
31 plt.show()
32
33 # Visualising the Test set results
34 plt.scatter(X_test, y_test, color = 'green')
35 plt.plot(X_train, regressor.predict(X_train), color = 'red')
36 plt.title('Graph between head size and brain weight (Test set)')
37 plt.xlabel('Head Size')
38 plt.ylabel('Brain Weight')
39 plt.show()
```

Variable explorer

Name	Type	Size	Value
X	int64	(237, 1)	[[4512] [3738]
X_test	int64	(79, 1)	[[3724] [3680]
X_train	int64	(158, 1)	[[3777] [3302]
dataset	DataFrame	(237, 4)	Column names: Gender, Age Range, Head Size(cm^3), Brain Weight(grams)
y	int64	(237,)	[1530 1297 1335 ... 1104 1170 1120]
y_pred	float64	(79,)	[1303.83322923 1292.73537163 1381.5182324 ... 1105.3329127 1363.8625 ...
y_test	int64	(79,)	[1280 1321 1425 ... 1070 1350 1522]
y_train	int64	(158,)	[1282 1165 1635 ... 1270 1215 1316]