

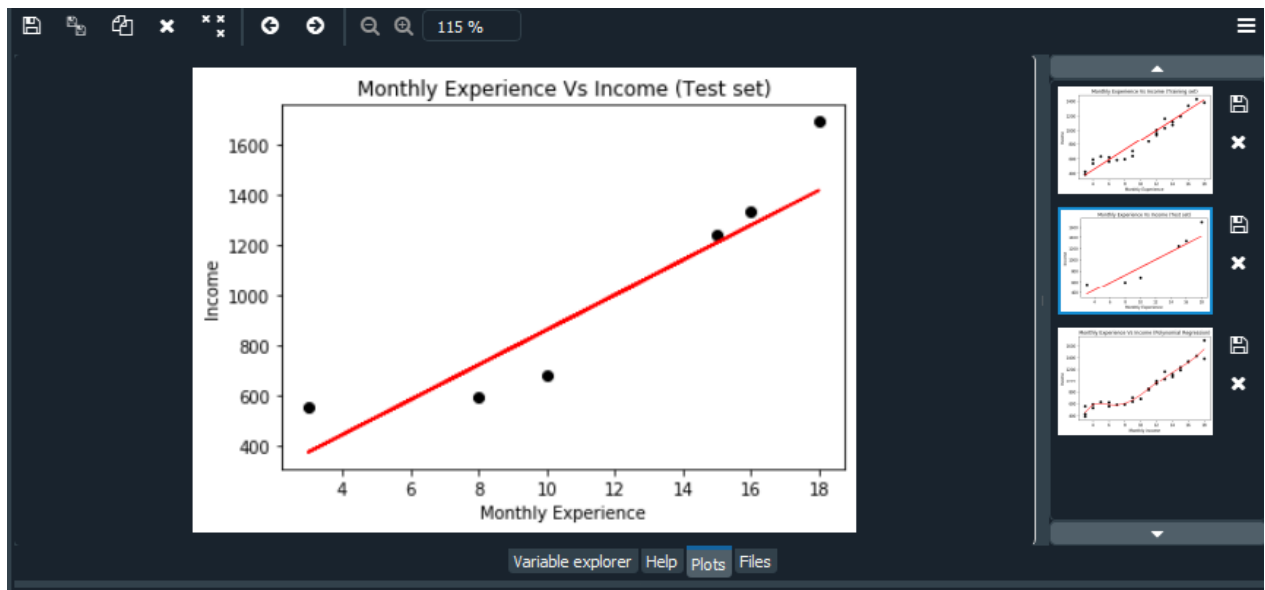
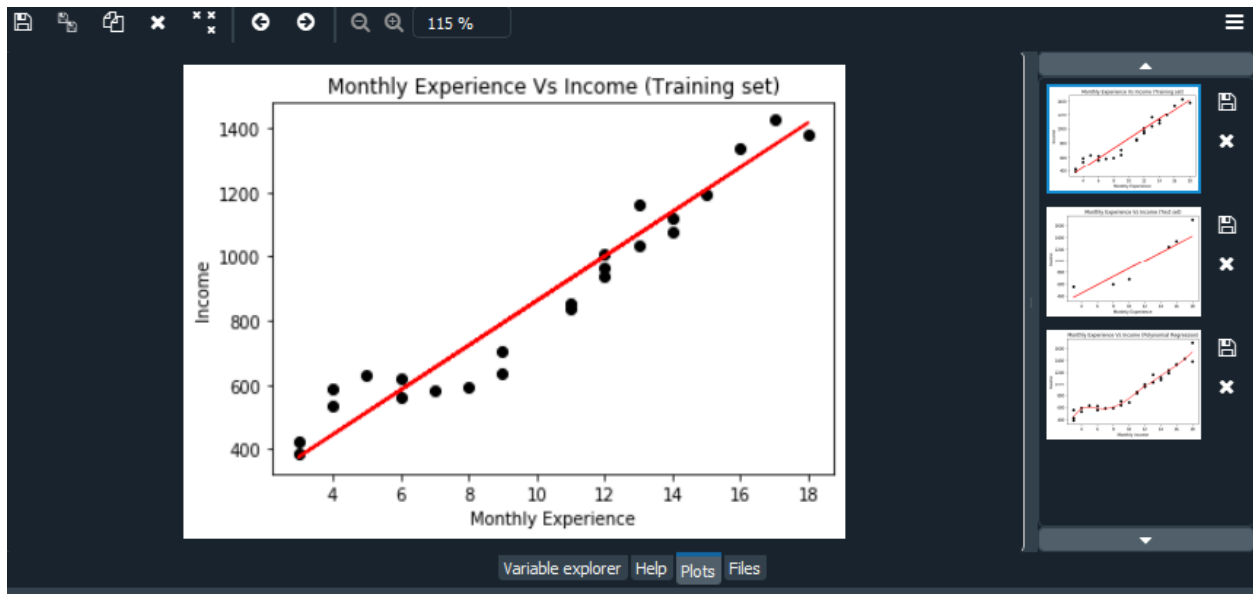
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1  # -*- coding: utf-8 -*-
2  """
3  Created on Sun Apr  5 22:11:34 2020
4
5  @author: Arshiya Anwer
6
7  """
8  # Polynomial Regression
9
10 # Importing the libraries
11 import numpy as np
12 import matplotlib.pyplot as plt
13 import pandas as pd
14
15 # Importing the dataset
16 dataset = pd.read_csv('C:/Users/Tasmiya Anwer/Desktop/monthly Experience Vs Income/monthlyexp vs incom.csv')
17 X = dataset.iloc[:, 0:1].values
18 y = dataset.iloc[:, -1].values
19 print('Monthly Experience')
20 print(X)
21 print('Income')
22 print(y)
23
24 # Splitting the dataset into the Training and Test set
25 from sklearn.model_selection import train_test_split
26 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.2, random_state = 0)
27
28
29 # Fitting Linear Regression to the dataset
30
31 from sklearn.linear_model import LinearRegression
32 linear_Regressor= LinearRegression()
33 linear_Regressor.fit(X,y)
34
35 # Predicting the Test set results
36 y_pred= linear_Regressor.predict(X_test)
37
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38 # Mapping the Training set results
39 plt.scatter(X_train, y_train, color = 'black')
40 plt.plot(X_train, linear_Regressor.predict(X_train), color = 'red')
41 print('Linear Regression')
42 plt.title('Monthly Experience Vs Income (Training set)')
43 plt.xlabel('Monthly Experience')
44 plt.ylabel('Income')
45 plt.show()
46
47 # Mapping the Test set results
48 plt.scatter(X_test, y_test, color = 'black')
49 plt.plot(X_train, linear_Regressor.predict(X_train), color = 'red')
50 plt.title('Monthly Experience Vs Income (Test set)')
51 plt.xlabel('Monthly Experience')
52 plt.ylabel('Income')
53 plt.show()
54
55 print('We did not get the Best-fit line')
56 print('Now Applying Polynomial Regression')
57 # Fitting Polynomial Regression to the dataset
58 from sklearn.preprocessing import PolynomialFeatures
59 polynomial_regressor= PolynomialFeatures(degree= 6)
60 X_poly = polynomial_regressor.fit_transform(X)
61 polynomial_regressor.fit(X_poly, y)
62 lin_reg_2 = LinearRegression()
63 lin_reg_2.fit(X_poly, y)
64
65 # mapping the Polynomial Regression results
66 plt.scatter(X, y, color = 'black')
67 plt.plot(X, lin_reg_2.predict(polynomial_regressor.fit_transform(X)), color = 'red')
68 plt.title('Monthly Experience Vs Income (Polynomial Regression)')
69 plt.xlabel('Monthly income')
70 plt.ylabel('Income')
71 plt.show()
72

```

LINEAR REGRESSION:



POLYNOMIAL REGRESSION:

