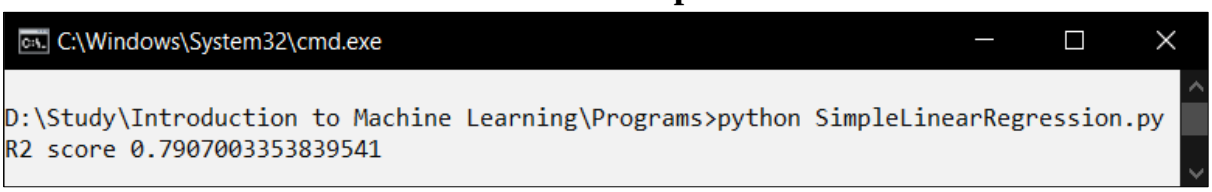
Experiment No. 1

Code:

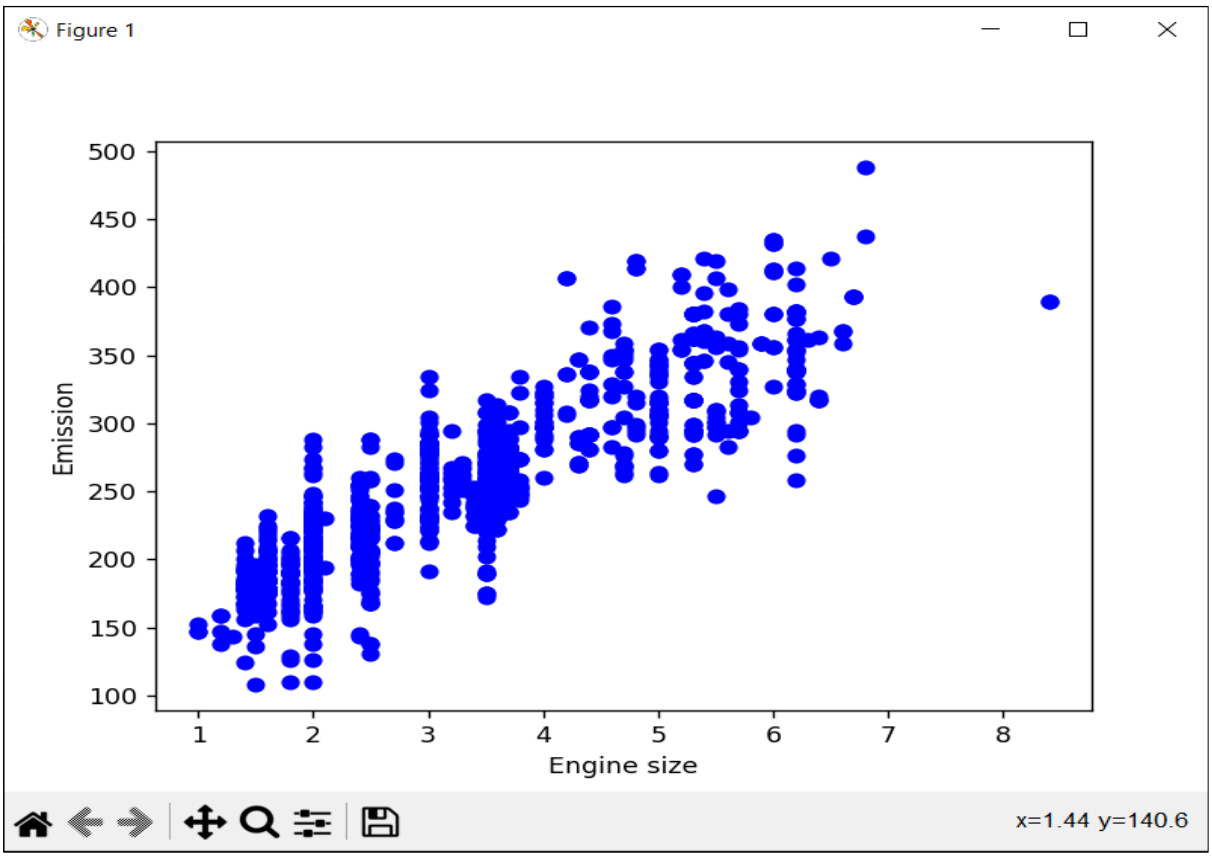
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression
from sklearn.model_selection import train_test_split
from sklearn.metrics import r2_score

df = pd.read_csv(r'FuelConsumptionCo2.csv')
df = df[['ENGINESIZE','CYLINDERS','FUELCONSUMPTION_CITY','FUELCONSUMPTION_HWY','FUELCONSUMPTION_COMB','FUELCONSUMPTION_COMB_MPG','CO2EMISSIONS']]

plt.scatter(df.ENGINESIZE, df.CO2EMISSIONS,  color='blue')
plt.xlabel("Engine size")
plt.ylabel("Emission")
plt.show()

X = df[['ENGINESIZE']]
y = df[['CO2EMISSIONS']]
X_train,X_test,y_train,y_test = train_test_split(X,y, test_size = 0.20)

reg = LinearRegression()
reg.fit(X_train,y_train)
y_pred = reg.predict(X_test)

plt.scatter(X_test.ENGINESIZE, y_pred,  color='blue')
plt.xlabel("Engine size")
plt.ylabel("Emission")
plt.show()

print('R2 score',r2_score(y_test,y_pred))
```

Output:

R2 Score for the test and predicted values



Scatter-plot of all observations of Emission and Engine size.



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