import pandas as pd

from sklearn.linear\_model import LinearRegression

from sklearn.preprocessing import PolynomialFeatures

from sklearn.model\_selection import train\_test\_split

import matplotlib.pyplot as plt

# data load using pandas

data = pd.read\_csv("/content/All ML.csv")

#divide data set value for x,y variable and x reshape by(-1,1)

working\_hours = data['Working\_hours'].values.reshape(-1,1)

Ot\_salary = data['Ot\_salary'].values

#transform the input data to iclude polynomial features of degree 2

Polynomial\_features = PolynomialFeatures(degree=2)

Working\_hours\_poly = Polynomial\_features.fit\_transform(working\_hours)

#split the dataset into training and testing sets

X\_train, X\_test, y\_train, y\_test = train\_test\_split(Working\_hours\_poly, Ot\_salary, test\_size=0.2, random\_state=42)

#creating the model

model = LinearRegression()

#fit the data

model.fit(X\_train, y\_train)

#Predicting the Ot\_salary

predicted\_train\_Ot\_salary = model.predict(X\_train)

predicted\_test\_Ot\_salary = model.predict(X\_test)

#prin the pred value

print("\033[1;33mPredicted:\033[0m", "\033[1;31m", predicted\_train\_Ot\_salary, "\033[0m","\n")

#plotting the results of dataset

plt.figure(figsize=(10, 6))

plt.style.use('dark\_background')

plt.scatter(working\_hours, Ot\_salary, color='blue', label='Actual Scores')

plt.scatter(working\_hours, model.predict(Working\_hours\_poly),color='red', label='Predicted score')

plt.xlabel('Working Hours', color='white')

plt.ylabel('Ot Salary', color='white')

plt.title('Polynomial Regression (Degree=2)', color='white')

plt.legend()

plt.show()

