#Polynomial curve fitting

import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

data = pd.read\_csv("/content/yulu\_bike\_sharing\_dataset.csv")

x\_data = data['temp']

y\_data = data['atemp']

degree = 2

coefficients = np.polyfit(x\_data, y\_data, degree)

poly\_fit = np.poly1d(coefficients)

x\_fit = np.linspace(min(x\_data), max(x\_data), 100)

y\_fit = poly\_fit(x\_fit)

plt.scatter(x\_data, y\_data, label='Original Data')

plt.plot(x\_fit, y\_fit, label=f'Fitted Polynomial (Degree {degree})', color='red')

plt.legend()

plt.xlabel('Temperature (X-axis)')

plt.ylabel('Apparent Temperature (Y-axis)')

plt.title('Polynomial Curve Fitting')

plt.show()

equation = np.poly1d(coefficients)

print("Quadratic Polynomial Equation:")

print(equation)