Polynomial Regression model for fish dataset:

```python
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import PolynomialFeatures
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error

# Load the dataset into a DataFrame
data = pd.read_csv(r"C:\Users\arpit\Downloads\Fish.csv")


X = data[['Length1', 'Length2', 'Length3', 'Height', 'Width']]
y = data['Weight']

# Split the dataset into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# Create Polynomial Features
poly = PolynomialFeatures(degree=2)
X_train_poly = poly.fit_transform(X_train)
X_test_poly = poly.transform(X_test)

# Fit a Linear Regression model to the polynomial features
model = LinearRegression()
model.fit(X_train_poly, y_train)

# Make predictions on the test set
y_pred = model.predict(X_test_poly)

# Evaluate the model
mse = mean_squared_error(y_test, y_pred)
rmse = np.sqrt(mse)
print("Root Mean Squared Error:", rmse)
```

```python
# Plot the actual vs. predicted values
plt.scatter(y_test, y_pred)
plt.xlabel("Actual Weight")
plt.ylabel("Predicted Weight")
plt.title("Actual vs. Predicted Weight (Polynomial Regression)")
plt.show()
```

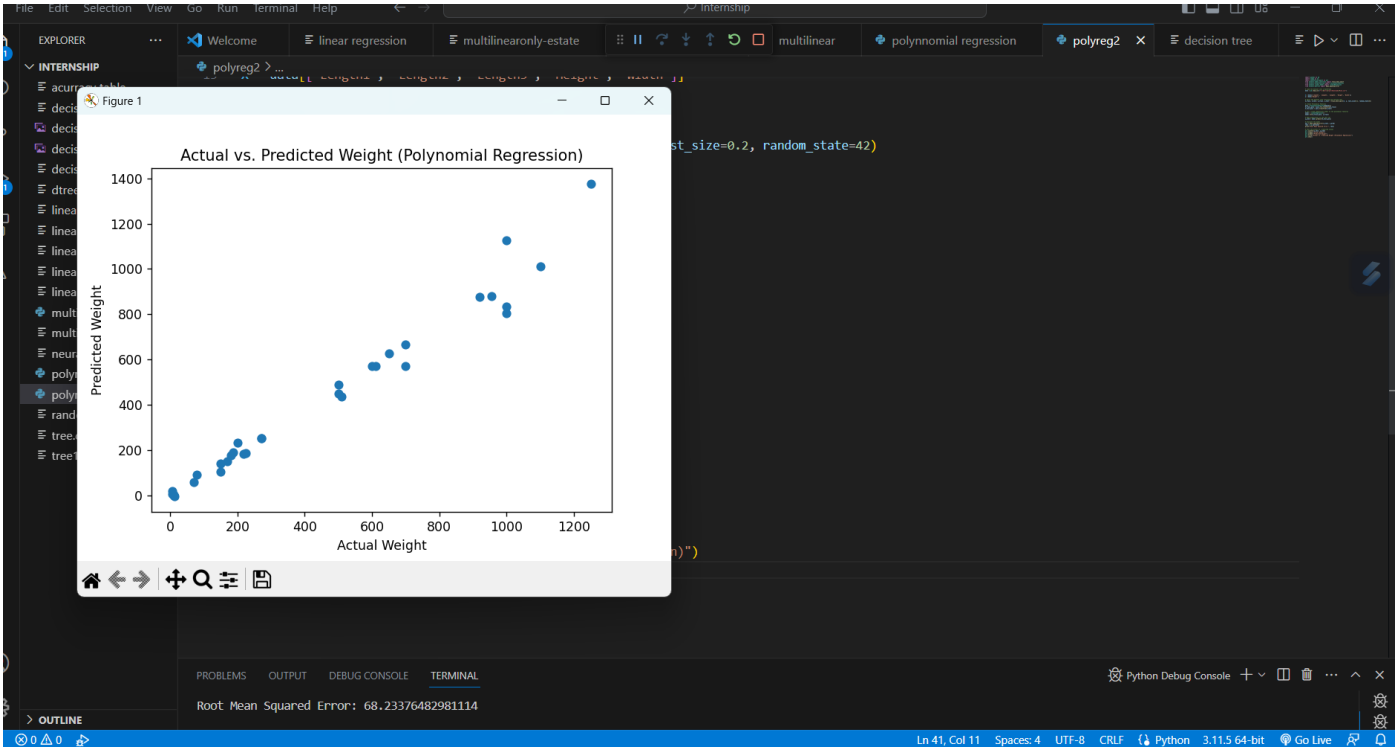
Figure 1
Actual vs. Predicted Weight (Polynomial Regression)
Predicted Weight
Actual Weight
0
200
400
600
800
1000
1200
1400
st_size=0.2, random_state=42)
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
Python Debug Console
Root Mean Squared Error: 68.23376482981114
Ln 41, Col 11
Spaces: 4
UTF-8
CRLF
Python
3.11.5 64-bit
Go Live