

File Edit Selection View Go Run Terminal Help ← → Q Statistical Methods and ML models

EXPLORER

OPEN EDITORS

- Sprint6_Test_Concept1.2.py
- ML374_S6_Concept_Weather_Cleaned_Data.csv
- Sprint6_Test_Concept1.1.ipynb

STATISTICAL METHODS AND M...

- .venv
- notes
- portal code
 - assignment
 - day1
 - day2
 - day4
 - day5
 - concept
 - practice
 - day6
 - concept
 - Sprint6_Test_Concept1.1

Portal code > day6 > concept > Sprint6_Test_Concept1.1 > Sprint6_Test_Concept1.1.ipynb > # =====

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y_pred = model.predict(X)
residuals = y_test - y_pred

[6] ✓ 0.0s Python

```
# =====  
# 1. Scatter: actual data + regression line  
# =====  
plt.figure(figsize=(6,6))  
plt.scatter(df['global_radiation'], df['temperature'], alpha=0.6)  
plt.plot(X, model.predict(X), color='yellow') # regression line  
plt.xlabel('global_radiation')  
plt.ylabel('temperature')  
plt.title('')  
plt.show()
```

[7] ✓ 0.5s Python

...

A scatter plot showing the relationship between global radiation (X-axis) and temperature (Y-axis). The X-axis ranges from -1.5 to 2.5, and the Y-axis ranges from -2 to 2. The data points are blue circles, and a yellow regression line is plotted through them, showing a positive correlation.

```
# =====  
# 2. Actual vs Predicted  
# =====
```

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- Sprint6_Test_Concept1.2.py portal ... U
- ML374_S6_Concept_Weather_Cleaned_Data.csv U
- Sprint6_Test_Concept1.1.ipynb U

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.venv (Python 3.12.10)

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- .venv
- notes
- portal code
 - assignment
 - day1
 - day2
 - day4
 - day5
 - concept
 - practice
 - day6
 - concept
 - Sprint6_Test_Concept1.1
 - ML374_S6_Concept_... U
 - Sprint6_Test_Concept... U

Python

```
# =====
# 2. Actual vs Predicted
# =====
plt.figure(figsize=(6,6))
plt.scatter(y_test, y_pred, alpha=0.6)
plt.plot([min(y_test), max(y_test)], [min(y_test), max(y_test)], 'y--') # diagonal
plt.xlabel('Actual')
plt.ylabel('Predicted')
plt.title('Actual vs. Predicted')
plt.show()
```

Actual vs. Predicted

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EXPLORER

OPEN EDITORS

- Sprint6_Test_Concept1.2.py portal ... U
- ML374_S6_Concept_Weather_Cleaned_Data.csv U
- Sprint6_Test_Concept1.1.ipynb U

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- .venv
- notes
- portal code
 - assignment
 - day1
 - day2
 - day4
 - day5
 - concept
 - practice
 - day6
 - concept
 - Sprint6_Test_Concept1.1

Sprint6_Test_Concept1.2.... U

- practice
- .gitignore
- .markdownlint.json
- readme.md
- syllabus.png
- syllabus.txt
- update-required.md

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.venv (Python 3.12.10)

=====
3. Residual Plot vs Index
=====
plt.figure(figsize=(6,6))
plt.scatter(range(len(residuals)), residuals, alpha=0.6)
plt.axhline(0, color='orange', linestyle='--')
plt.xlabel('Index')
plt.ylabel('Residuals')
plt.title('Residual plot')
plt.show()

[9] ✓ 0.1s Python

Residual plot

=====
4. Histogram of Errors
=====

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OPEN EDITORS

- Sprint6_Test_Concept1.2.py portal ... U
- ML374_S6_Concept_Weather_Cleaned_Data.csv U
- Sprint6_Test_Concept1.1.ipynb U

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- .venv
- notes
- portal code
 - assignment
 - day1
 - day2
 - day4
 - day5
 - concept
 - practice
 - day6
 - concept
 - Sprint6_Test_Concept1.1

Python

```
# =====
# 4. Histogram of Errors
# =====
plt.figure(figsize=(6,5))
plt.hist(residuals, bins=20, density=True, alpha=0.7)
plt.xlabel('Error Value')
plt.ylabel('Probability Density')
plt.title('Errors Distribution')
plt.show()
```

[1s] ✓ 0.1s

Errors Distribution

Probability Density

Error Value

```
# =====
# 5. Regression line again (bottom final)
# =====
plt.figure(figsize=(6,6))
plt.scatter(df['global_radiation'], df['temperature'], alpha=0.6)
plt.plot(X, model.predict(X), color='yellow')
plt.xlabel('global_radiation')
plt.ylabel('temperature')
```

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.venv (Python 3.12.10)

0.0 -2 -1 0 1 2 Error Value

====== # 5. Regression line again (bottom final) # ====== plt.figure(figsize=(6,6)) plt.scatter(df['global_radiation'], df['temperature'], alpha=0.6) plt.plot(X, model.predict(X), color='yellow') plt.xlabel('global_radiation') plt.ylabel('temperature') plt.show()

[11] ✓ 0.1s Python

global_radiation temperature

A scatter plot showing the relationship between global radiation and temperature. The x-axis is labeled 'global_radiation' and ranges from -1.5 to 2.5. The y-axis is labeled 'temperature' and ranges from -3 to 3. The plot contains numerous blue data points forming a dense cloud. A solid yellow line represents a linear regression fit through the data.

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