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Statistical Methods and ML models

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

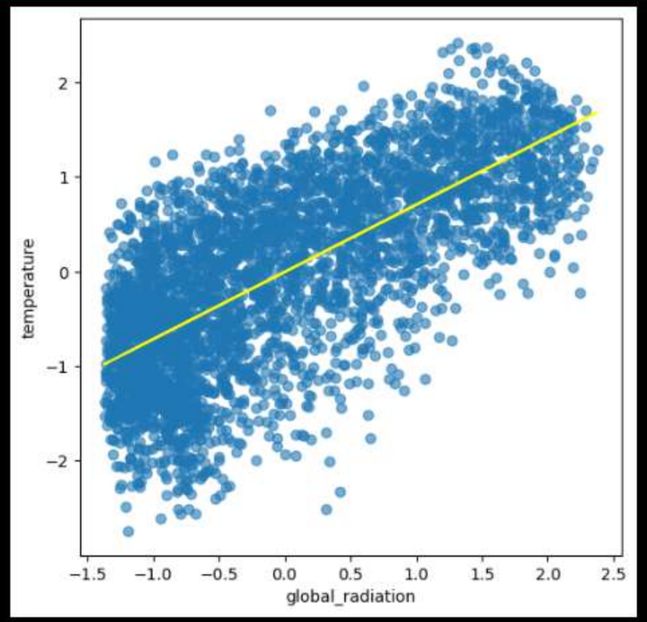
Generate | Code | Markdown | Run All | Restart | Clear All Outputs | Jupyter Variables | Outline | .venv (Python 3.12.10)

```
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




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

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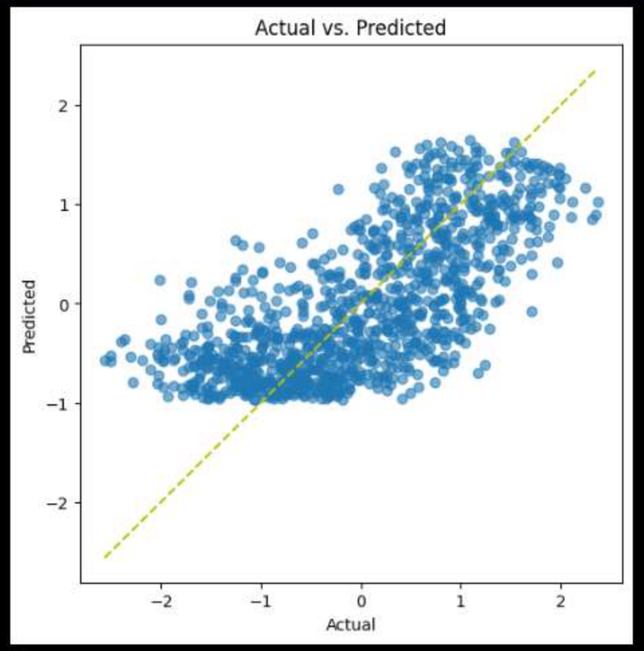
global_radiation

```
# ==========
# 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()
```

[8] 0.1s Python




```
# ==========
```

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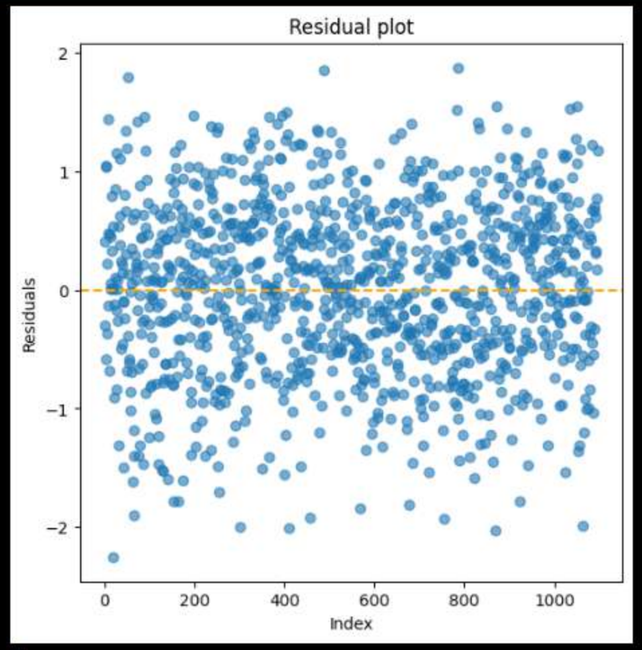
Generate | + Code | + Markdown | Run All | Restart | Clear All Outputs | Jupyter Variables | Outline | ... | .venv (Python 3.12.10)

```
# ============================
# 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




```
# ============================
# 4. Histogram of Errors
# ============================
```

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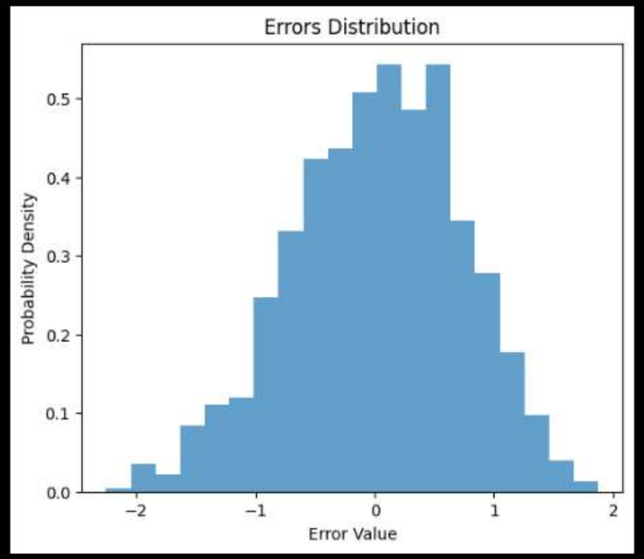
```
# ============================
# 4. Histogram of Errors
# ============================
plt.figure(figsize=(6,5))
plt.hist(residuals, bins=20, density=True, alpha=0.7)
plt.xlabel('Error Value')
plt.ylabel('Probability Density')
plt.title('Errors Distribution')
plt.show()
```

[18] 0.1s Python




```
# ============================
# 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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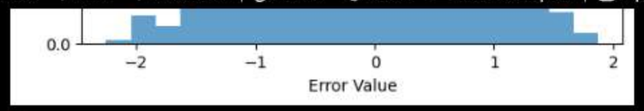
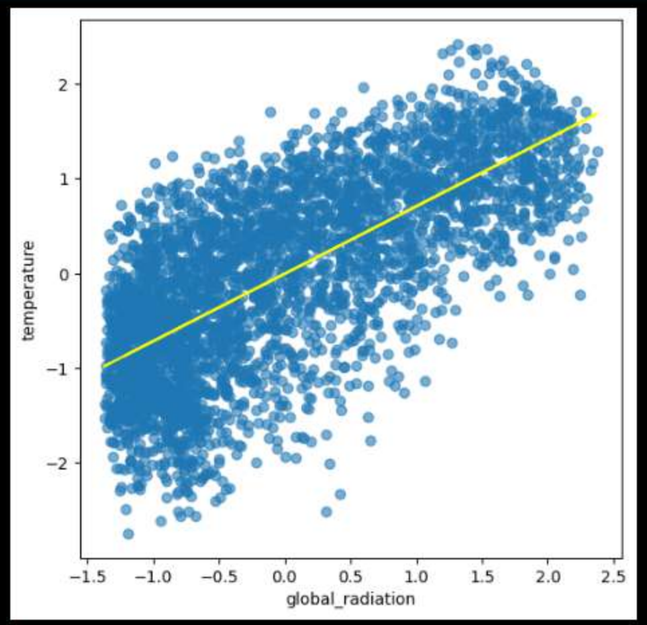



```
# ==========================
# 5. Regression line again (bottom final)
# ==========================
plt.figure(figsize=(6,6))
plt.scatter(df['global_radiation'], df['temperature'], alpha=0.6)
plt.plot(X, model.predict(X), color='yellow')
plt.xlabel('global_radiation')
plt.ylabel('temperature')
plt.show()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

[11] ✓ 0.1s Python



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