

MATPLOTLIB TASK

1. Basic Data Understanding

- What does the dataset look like?
- What are the column names, data types, and basic statistics?
- Are there missing values or anomalies?

((No plot required — just inspection using Pandas.))

2. Trend Analysis

- How does a numerical variable (e.g., *Sales*) change over time or index?
- Are there visible upward or downward trends?
- Are there any noticeable spikes, dips, or seasonality?

lineplot

3. Category Comparison

- Which category (e.g., *Region*, *Product*, *Department*) contributes most to the total value?
- Which categories have lower contributions?
- How big is the gap between categories?

barplot

4. Value Distribution

- How are values in a numerical column distributed?
- Are they concentrated around certain ranges or spread out evenly?
- Are there extreme values?

histplot

5. Relationship Between Variables

- How does one numerical variable relate to another (e.g., *Sales vs Profit*)?
- Is there any visible correlation?
- Are there outliers?

scatterplot

6. Outliers & Spread

- How spread out are values in a numerical column?
- Are there any outliers?
- How does this spread differ across categories?

boxplot

7. Proportions

- How is the dataset divided among different categories?
- Which category has the largest share?
- Is the distribution balanced or skewed?

pieplot

8. Multiple Visuals in One View

- How do multiple insights look side by side?
- Can we spot patterns when trend, distribution, and relationships are combined visually?
- Which plot gives the clearest story?

subplots

9. Final Task Submission

Your final notebook/script must include:

- All questions answered with appropriate Matplotlib plots.
- Proper customization (titles, labels, legends, grids).
- A short written note (markdown) under each plot describing what the plot reveals.
- All code should be your own — no Seaborn or external visualization libraries