

1.What is Matplotlib and why is it used?

Matplotlib is a Python library used for creating graphs and plots to visualize data easily.

2. Difference between line plot, bar plot, and scatter plot

- **Line plot:** Shows trends or changes over time
- **Bar plot:** Compares quantities across categories
- **Scatter plot:** Shows relationship between two variables

3. What are figure and axes in Matplotlib?

- **Figure:** The overall window or canvas of the plot
- **Axes:** The area where data is actually plotted

4. How do labels, titles, and legends improve data visualization?

They make graphs clear, readable, and easy to understand by explaining what the data represents.

5. Why is data visualization important before building AI models?

It helps identify patterns, trends, outliers, and data quality issues before training models.