

Day 5: Data Visualization using Matplotlib - Practical Questions

Dataset: Titanic Dataset (train.csv)

Download from: <https://www.kaggle.com/c/titanic/data>

Objective: Practice basic to intermediate plotting techniques using matplotlib

1. Import matplotlib.pyplot and create a basic line plot showing fare values of the first 10 passengers.
 2. Create a bar chart showing the number of passengers in each passenger class (Pclass).
 3. Plot a histogram of the 'Age' column to visualize the distribution of ages.
 4. Create a scatter plot comparing 'Age' and 'Fare'. Add labels and a title to the plot.
 5. Create a pie chart showing the percentage of survivors vs non-survivors.
 6. Customize any one plot with:
 - X and Y labels
 - Title
 - Grid
 - Color and style changes
 7. Create two subplots side-by-side:
 - Left: Bar chart of survival count by gender
 - Right: Pie chart of 'Embarked' values
 8. Use figure() and subplot() to create a 2x2 layout:
 - Plot 4 different visualizations (line, bar, scatter, histogram) of relevant Titanic data.
 9. Save one of your plots as an image file named 'titanic_plot.png'.
 10. Explain the difference between when to use a line plot vs a scatter plot using Titanic data as an example.
- # Bonus:
11. Create a stacked bar plot showing the number of survivors and non-survivors in each passenger class.
 12. Try customizing marker styles, colors, and sizes in the scatter plot of 'Age' vs 'Fare'.