

1. Matplotlib Functions

Basic Plots

- `plt.plot(x, y, marker='o', linestyle='-', color='blue')`
Line plot.
- `plt.bar(x, height, color='blue')`
Bar plot.
- `plt.hist(data, bins=10, color='blue', edgecolor='black')`
Histogram.
- `plt.scatter(x, y, color='blue')`
Scatter plot.
- `plt.pie(sizes, labels=labels, autopct='%1.1f%%')`
Pie chart.

Customizing Plots

- `plt.xlabel('X-axis Label'), plt.ylabel('Y-axis Label')`
Set axis labels.
- `plt.title('Title')`
Set title.
- `plt.legend()`
Add legend.
- `plt.grid(True)`
Add grid.
- `plt.xticks(rotation=45), plt.yticks(rotation=45)`
Rotate ticks.
- `plt.show()`
Display plot.

2. Seaborn Functions

Statistical Plots

- `sns.histplot(data=df, x='column', bins=20, kde=True)`
Histogram with KDE.
- `sns.boxplot(data=df, x='column')`
Box plot.
- `sns.violinplot(data=df, x='column')`
Violin plot for distribution.
- `sns.scatterplot(data=df, x='col1', y='col2', hue='category')`
Scatter plot.
- `sns.heatmap(df.corr(), annot=True, cmap='coolwarm')`
Heatmap of correlation matrix.

Categorical Plots

- `sns.countplot(data=df, x='column')`
Count plot.
- `sns.barplot(data=df, x='category', y='value', hue='group')`
Bar plot with grouping.
- `sns.stripplot(data=df, x='category', y='value', jitter=True)`
Strip plot for category distribution.

Pair and Joint Plots

- `sns.pairplot(df, hue='category')`
Pairwise relationship plots.
- `sns.jointplot(data=df, x='col1', y='col2', kind='scatter')`
Joint scatter plot.

Line and Area Plots

- `sns.lineplot(data=df, x='time', y='value', hue='group')`
Line plot.
- `sns.area_plot = sns.lineplot(data=df, x='time', y='value', hue='group', alpha=0.3)`
Area plot.