

Packages

`import matplotlib.pyplot as plt`

`import seaborn as sns` visually nice, high-level interface to Matplotlib, might still need Matplotlib for customisation

`import plotly.express as px` has hover tool capabilities, visually attractive

Basics

`fig, ax = subplots()` plot on the same subplot
`ax.plot(x, y1, c='b', ls='-')`
`ax.plot(x,y2, c='r', ls=':')`

`fig, axes = subplots(2, 1, sharex=True, sharey=True)` create a 2 by 1 subplot
`axes[0].plot(x, y1)`
`axes[1].plot(x,y2)`

`fig = plt.figure()` `figsize=(10,6)`
`plt.plot(x, y)` another way of writing the code, without subplots

`plt.tight_layout()` auto fit subplots in area

`plt.show()` print (use this when not using jupyter notebook)

`fig.show()`

Charts

Line Chart `plt.plot(x, y)` `label='line1', c='red', ls='--' / ':'`

Bar Chart `plt.bar(x, y)` `edgecolor='black'`

Histogram (for freq) `plt.hist(data)` `bins (can be int or seq), rwidth=0.8`

Stack plot `plt.stackplot(x, y1, y2, colours=['r', 'b'])`

Scatter plot `plt.scatter(X, Y)` `marker='x'`

Scatter plot `plt.scatter(X[:,0], X[:,1], c=colors)`
`colors=['red' if v==0 else 'blue' if v==1 else 'green' for v in y]`
`plt.scatter(X[:,0], X[:,1], c=colors)`
 y is the label here [0, 1, 2]
 X[:,0] is the first col of the features, X[:,1] is the second, they are the x and y axis of the scatter plot

Plot Decorations & Others

`plt.title('abc')`

`plt.suptitle('abc')` super title (useful when there are multiple subplots)

`plt.ylabel('desc')` X axis label

`plt.xlabel('desc')` Y axis label

`plt.legend()` `loc='best' / 'upper right' / 'lower center'`

