

Importing the library

```
import matplotlib.pyplot as plt
```

Plots and key arguments

Line graph `plt.plot(x_data, y_data)`

Scatter plot `plt.scatter(x_data, y_data)`

Bar chart `plt.bar(x_locs, bar_heights, width = int)`

Histogram `plt.hist(data, bins = int)`

Pie chart `plt.pie(data, labels = list)`

Optional arguments

`color = "color"` Change plot color

`marker = "symbol"` Change marker for line or scatter plot (".", "x", "|", "o")

`markersize = int` Change marker size

`linewidth = int` Change line width for line graph

`cmap = colormap` Color plot according to a colormap

Key functions

`plt.clf()` Clear figure

`plt.savefig("filename")` Save figure (call before `plt.show()`)

`plt.show()` Show figure

Axis functions

`plt.xlim(xmin, xmax)` Set the limits for the x axis

`plt.ylim(ymin, ymax)` Set the limits for the y axis

`plt.xscale("scale type")` Set scale for the x axis (ex. "log")

`plt.yscale("scale type")` Set scale for the y axis (ex. "log")

`plt.twinx()` Add a second y axis

`plt.axis("off")` Do not show the axes

`plt.gca().invert_xaxis()` Invert the x axis

`plt.gca().invert_yaxis()` Invert the y axis

Labeling functions

`plt.title("title")` Add a title

`plt.xlabel("x axis label")` Add a label to the x axis

`plt.ylabel("y axis label")` Add a label to the y axis

`plt.legend(loc = int)` Add a legend

`plt.xticks(range(min, max, interval))` Modify the x axis tick marks

Multiple plots

```
plt.plot(x_data1, y_data1)
```

```
plt.plot(x_data2, y_data2)
```

```
plt.plot(x_data3, y_data3)
```

```
plt.show()
```

You can put multiple plots in one figure by defining each one before `plt.show()` or `plt.savefig()`

Using colormaps

```
# Choose a colormap and assign to a variable
```

```
cm = plt.cm.get_cmap("RdYlBu")
```

```
# Set the color map in a plot
```

```
plt.scatter(x_data, y_data,
```

```
cmap=cm)
```

See all colormaps here:

<https://matplotlib.org/users/colormaps.html>



By **gabriellerab**

cheatography.com/gabriellerab/

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