

### Importing the library

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

### Plots and key arguments

Line graph	<code>plt.plot()</code>	<code>(x_data, y_data)</code>
Scatter plot	<code>plt.scatter()</code>	<code>(x_data, y_data)</code>
Bar chart	<code>plt.bar()</code>	<code>(x_locs, bar_heights, width = int)</code>
Histogram	<code>plt.hist()</code>	<code>(data, bins = int)</code>
Pie chart	<code>plt.pie()</code>	<code>(data, labels = list)</code>

### Optional arguments

<code>color = "color"</code>	Change plot color
<code>marker = "symbol"</code>	Change marker for line or scatter plot (".", "x", " ", "o")
<code>markersize = int</code>	Change marker size
<code>linewidth = int</code>	Change line width for line graph
<code>cmap = colormap</code>	Color plot according to a colormap

### Key functions

<code>plt.clf()</code>	Clear figure
<code>plt.savefig("filename")</code>	Save figure (call before <code>plt.show()</code> )
<code>plt.show()</code>	Show figure

### Axis functions

<code>plt.xlim(xmin, xmax)</code>	Set the limits for the x axis
<code>plt.ylim(ymin, ymax)</code>	Set the limits for the y axis
<code>plt.xscale("scale type")</code>	Set scale for the x axis (ex. "log")
<code>plt.yscale("scale type")</code>	Set scale for the y axis (ex. "log")
<code>plt.twinx()</code>	Add a second y axis
<code>plt.axis("off")</code>	Do not show the axes
<code>plt.gca().invert_xaxis()</code>	Invert the x axis
<code>plt.gca().invert_yaxis()</code>	Invert the y axis

### Labeling functions

<code>plt.title("title")</code>	Add a title
<code>plt.xlabel("x axis label")</code>	Add a label to the x axis
<code>plt.ylabel("y axis label")</code>	Add a label to the y axis
<code>plt.legend(loc = int)</code>	Add a legend
<code>plt.xticks(range(min, max, interval))</code>	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>