

Quick start

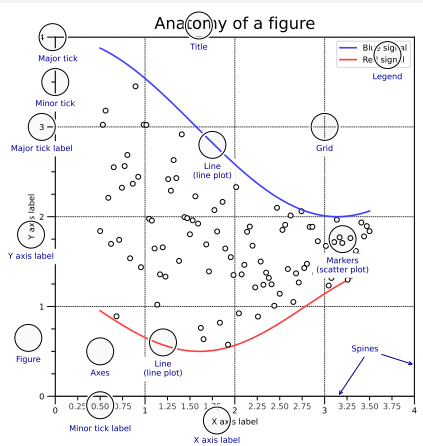
```
import numpy as np
import matplotlib as mpl
import matplotlib.pyplot as plt
```

```
X = np.linspace(0, 2*np.pi, 100)
Y = np.cos(X)
```

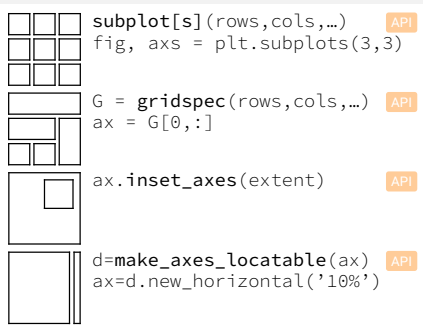
```
fig, ax = plt.subplots()
ax.plot(X,Y,color='C1')
```

```
fig.savefig("figure.pdf")
fig.show()
```

Anatomy of a figure



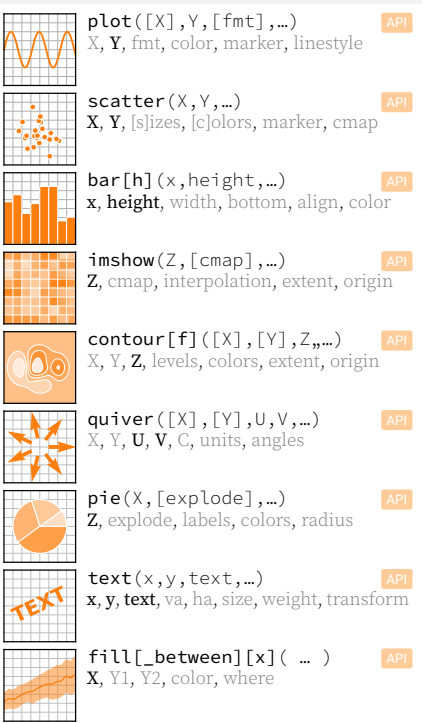
Subplots layout



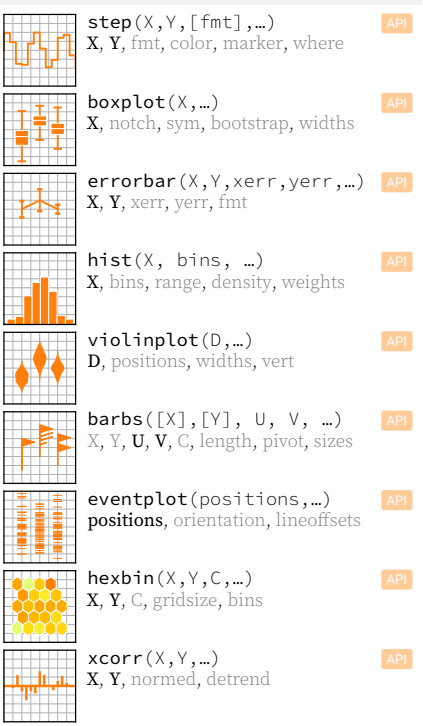
Getting help

- matplotlib.org
- github.com/matplotlib/matplotlib/issues
- discourse.matplotlib.org
- stackoverflow.com/questions/tagged/matplotlib
- gitter.im/matplotlib
- twitter.com/matplotlib
- Matplotlib users mailing list

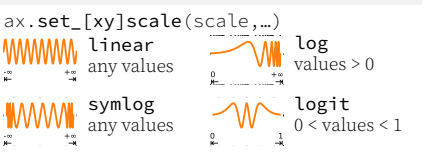
Basic plots



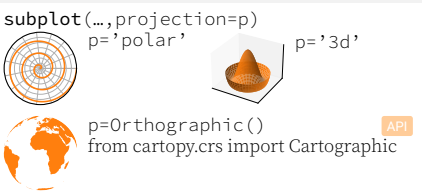
Advanced plots



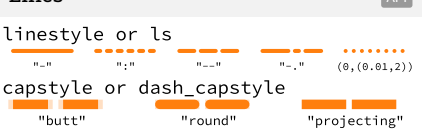
Scales



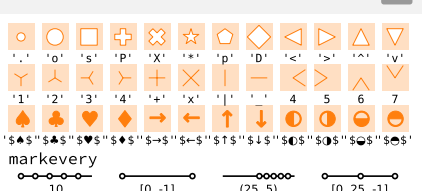
Projections



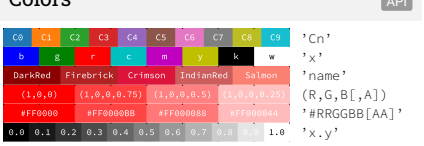
Lines



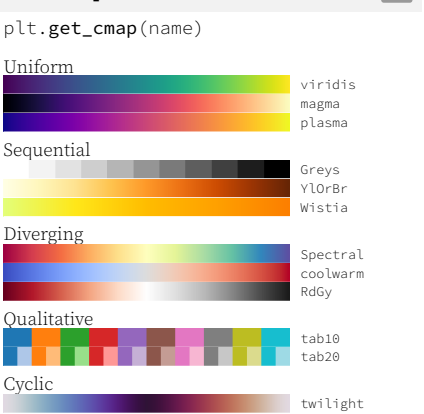
Markers



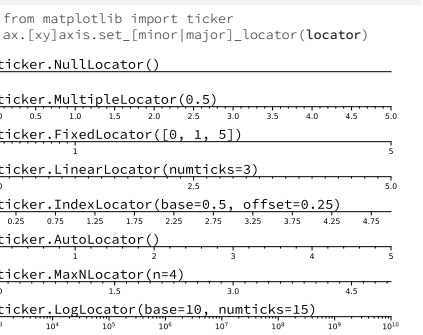
Colors



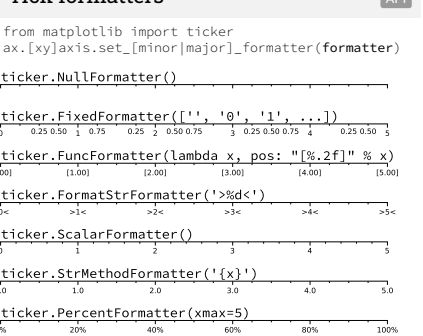
Colormaps



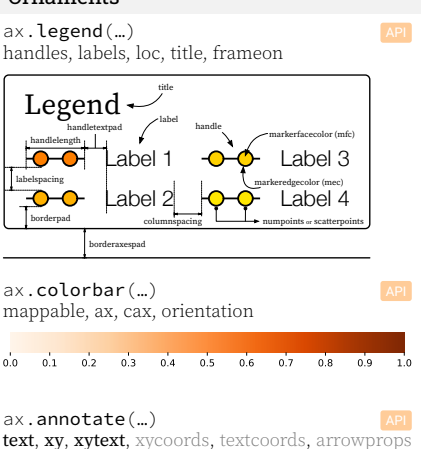
Tick locators



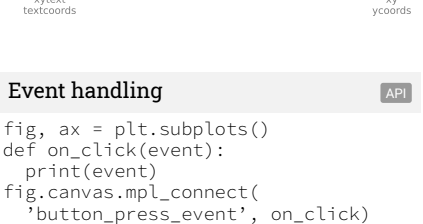
Tick formatters



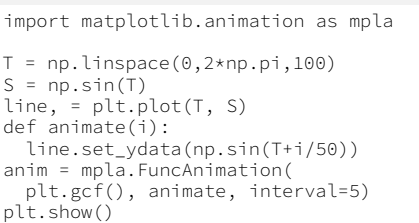
Ornaments



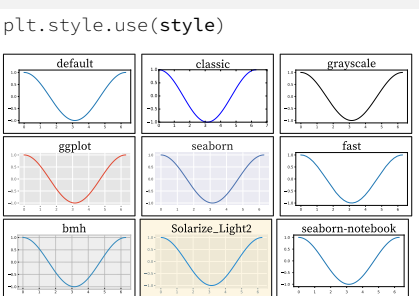
Event handling



Animation



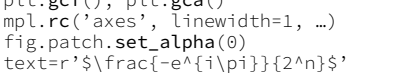
Styles



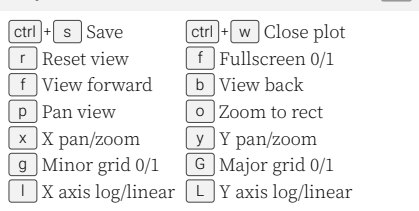
Quick reminder



Figure layout



Keyboard shortcuts



Ten simple rules

1. Know Your Audience
2. Identify Your Message
3. Adapt the Figure
4. Captions Are Not Optional
5. Do Not Trust the Defaults
6. Use Color Effectively
7. Do Not Mislead the Reader
8. Avoid "Chartjunk"
9. Message Trumps Beauty
10. Get the Right Tool

