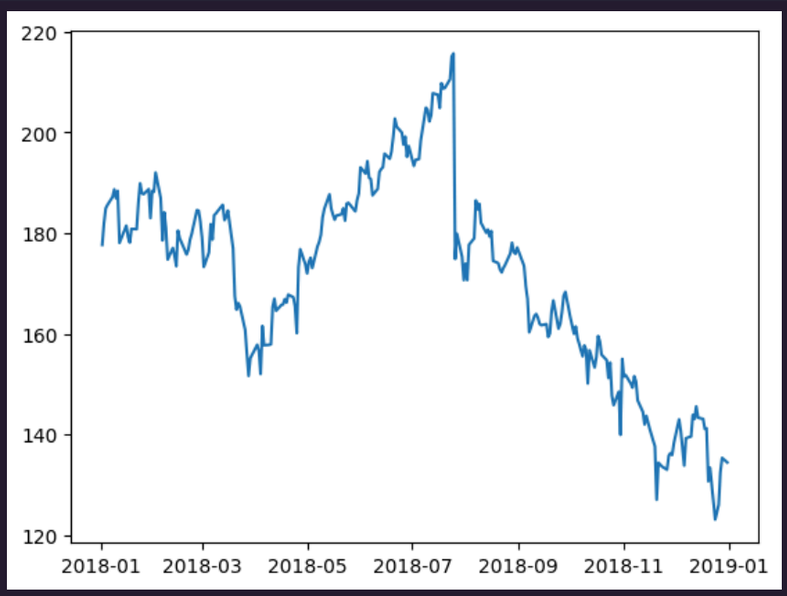
```
import matplotlib.pyplot as plt
import pandas as pd
```

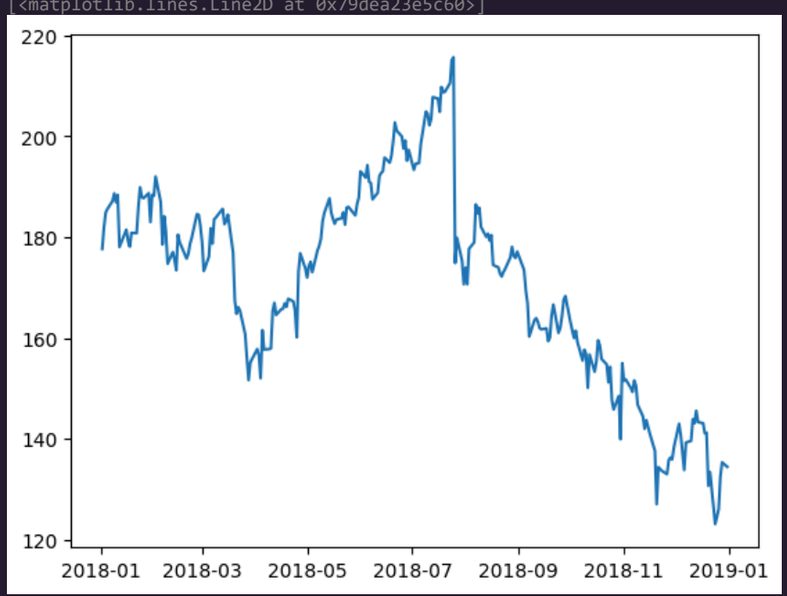
Plotting lines

```
fb = pd.read_csv(
 '/content/fb_stock_prices_2018.csv', index_col='date', parse_dates=True
)
plt.plot(fb.index, fb.open)
plt.show()
```




```
%matplotlib inline
import matplotlib.pyplot as plt
import pandas as pd
fb = pd.read_csv(
 '/content/fb_stock_prices_2018.csv', index_col='date', parse_dates=True
)
plt.plot(fb.index, fb.open)
```

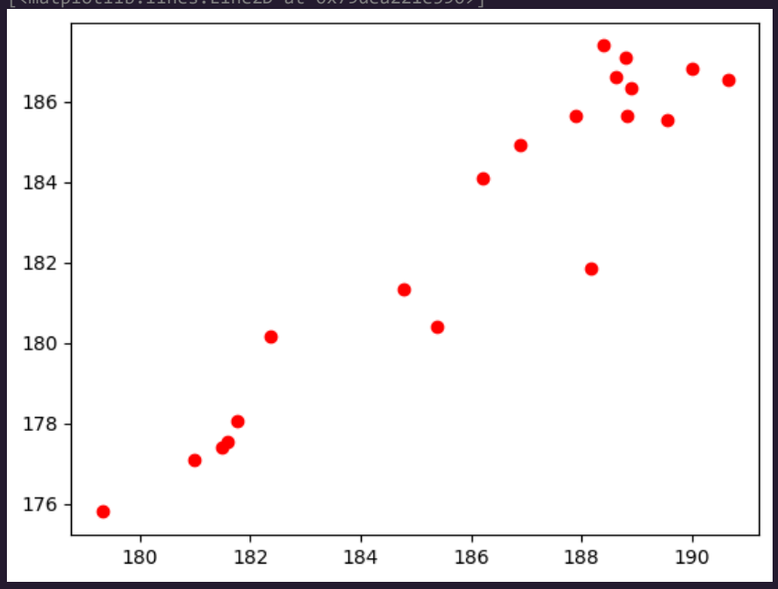
```
[<matplotlib.lines.Line2D at 0x79dea23e5c60>]
```



Scatter plots

```
plt.plot('high', 'low', 'ro', data=fb.head(20))
```

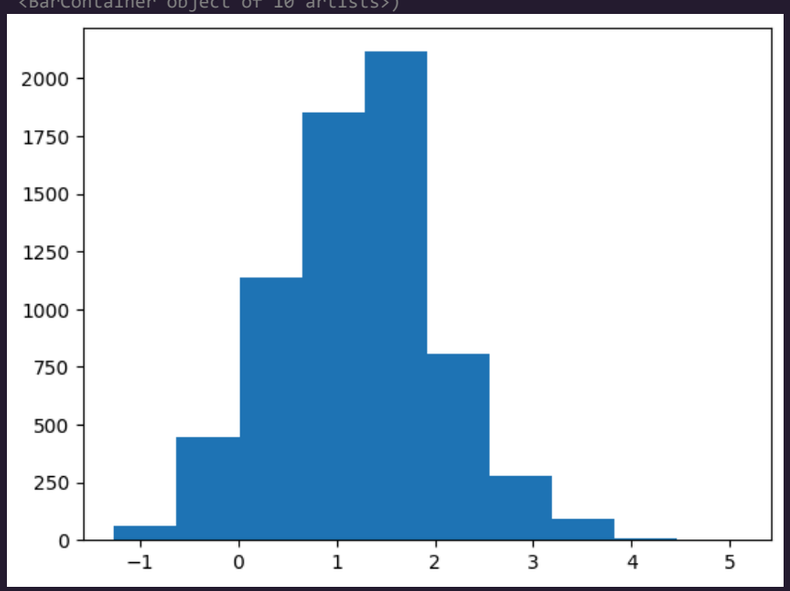
```
[<matplotlib.lines.Line2D at 0x79dea221e590>]
```



Histograms

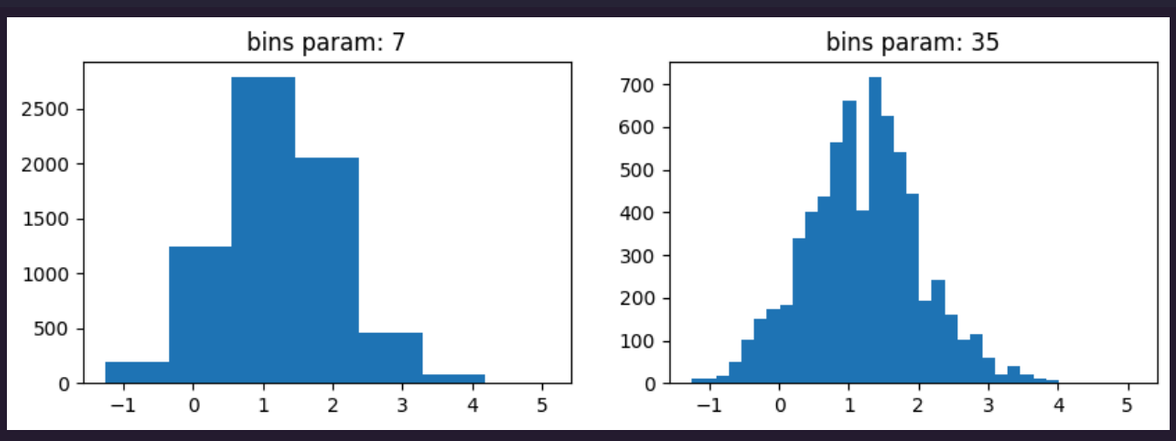
```
1 quakes = pd.read_csv('/content/earthquakes-1.csv')
2 plt.hist(quakes.query('magType == "ml"').mag)
```

```
(array([6.400e+01, 4.450e+02, 1.137e+03, 1.853e+03, 2.114e+03, 8.070e+02,
        2.800e+02, 9.200e+01, 9.000e+00, 2.000e+00]),
 array([-1.26 , -0.624,  0.012,  0.648,  1.284,  1.92 ,  2.556,  3.192,
         3.828,  4.464,  5.1  ]),
 <BarContainer object of 10 artists>)
```



Bin size matters

```
1 x = quakes.query('magType == "ml"').mag
2 fig, axes = plt.subplots(1, 2, figsize=(10, 3))
3 for ax, bins in zip(axes, [7, 35]):
4  ax.hist(x, bins=bins)
5  ax.set_title(f'bins param: {bins}')
```



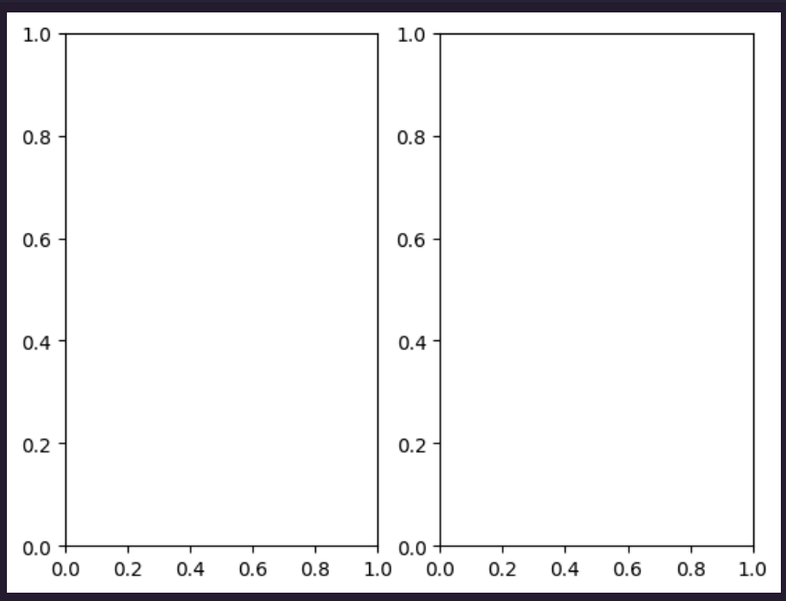
Plot components

```
1 fig = plt.figure()
```

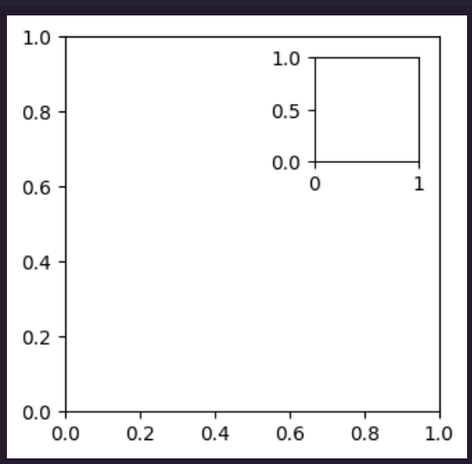
```
<Figure size 640x480 with 0 Axes>
```

Creating subplots

```
1 fig, axes = plt.subplots(1, 2)
```

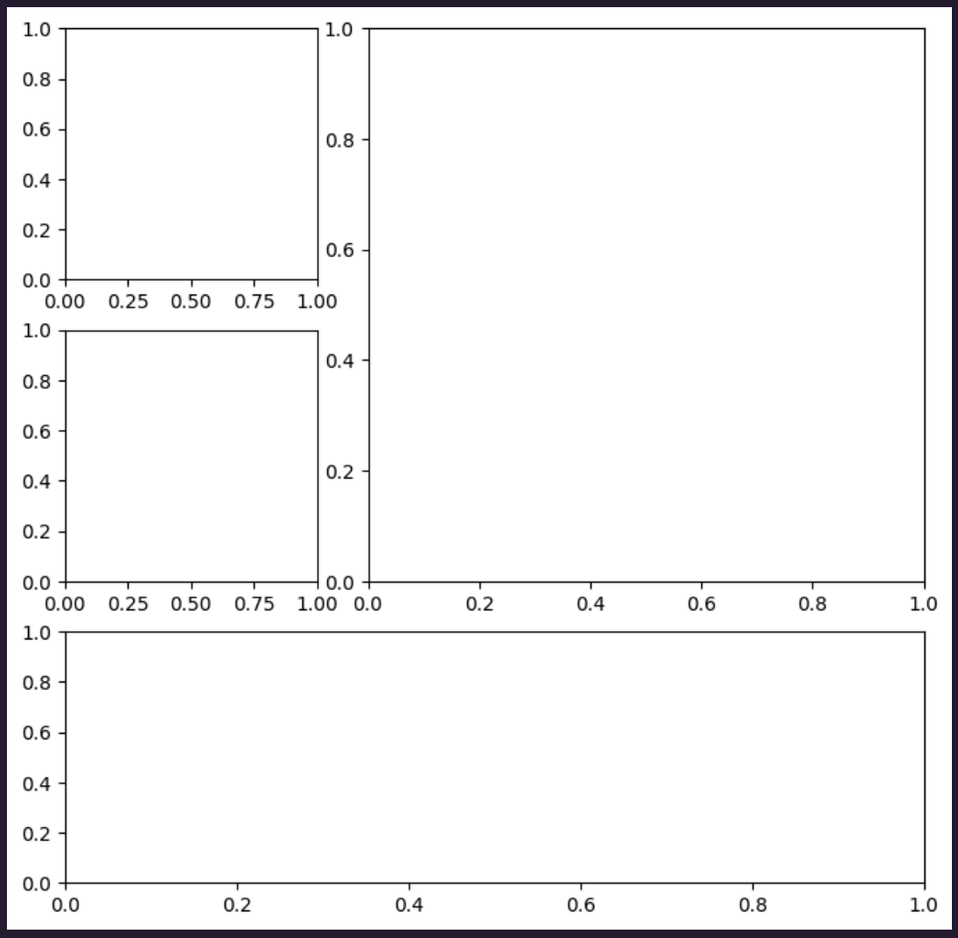



```
1 fig = plt.figure(figsize=(3, 3))
2 outside = fig.add_axes([0.1, 0.1, 0.9, 0.9])
3 inside = fig.add_axes([0.7, 0.7, 0.25, 0.25])
```



Creating Plot Layouts with gridspec

```
1 fig = plt.figure(figsize=(8, 8))
2 gs = fig.add_gridspec(3, 3)
3 top_left = fig.add_subplot(gs[0, 0])
4 mid_left = fig.add_subplot(gs[1, 0])
5 top_right = fig.add_subplot(gs[:2, 1:])
6 bottom = fig.add_subplot(gs[2,:])
```



Saving plots

```
1 fig.savefig('empty.png')
```

Cleaning up

```
1 plt.close('all')
```

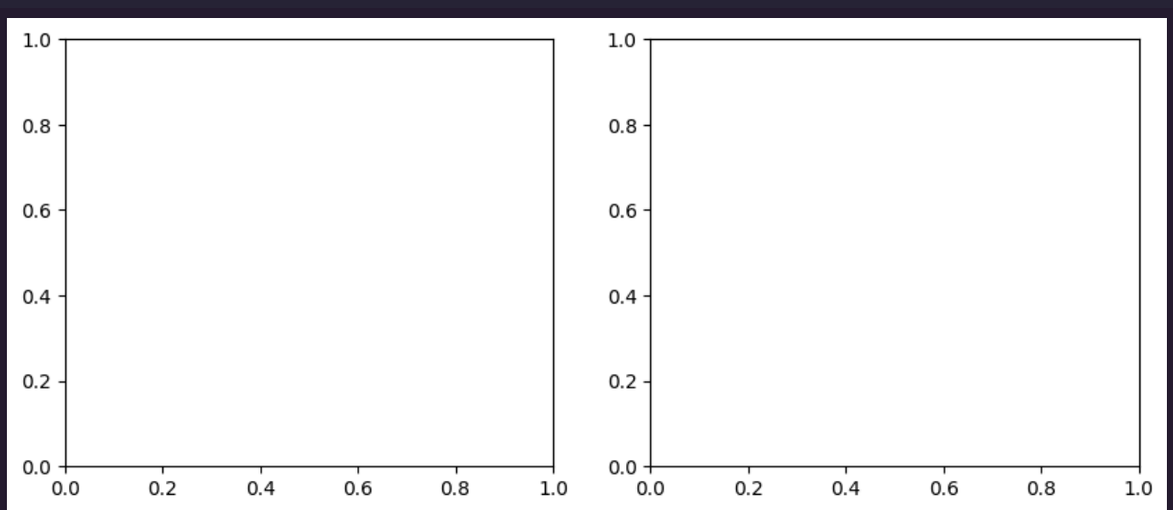
Additional plotting options

Specifying figure size

```
1 fig = plt.figure(figsize=(10, 4))
```

```
<Figure size 1000x400 with 0 Axes>
```

```
1 fig, axes = plt.subplots(1, 2, figsize=(10, 4))
```



rcParams

```
import random
import matplotlib as mpl
rcparams_list = list(mpl.rcParams.keys())
random.seed(20) # make this repeatable
random.shuffle(rcparams_list)
sorted(rcparams_list[:20])

```

```
['animation.convert_args',
 'axes.edgecolor',
 'axes.formatter.use_locale',
 'axes.spines.right',
 'boxplot.meanprops.markersize',
 'boxplot.showfliers',
 'keymap.home',
 'lines.markerfacecolor',
 'lines.scale_dashes',
 'mathtext.rm',
 'patch.force_edgecolor',
 'savefig.facecolor'
```