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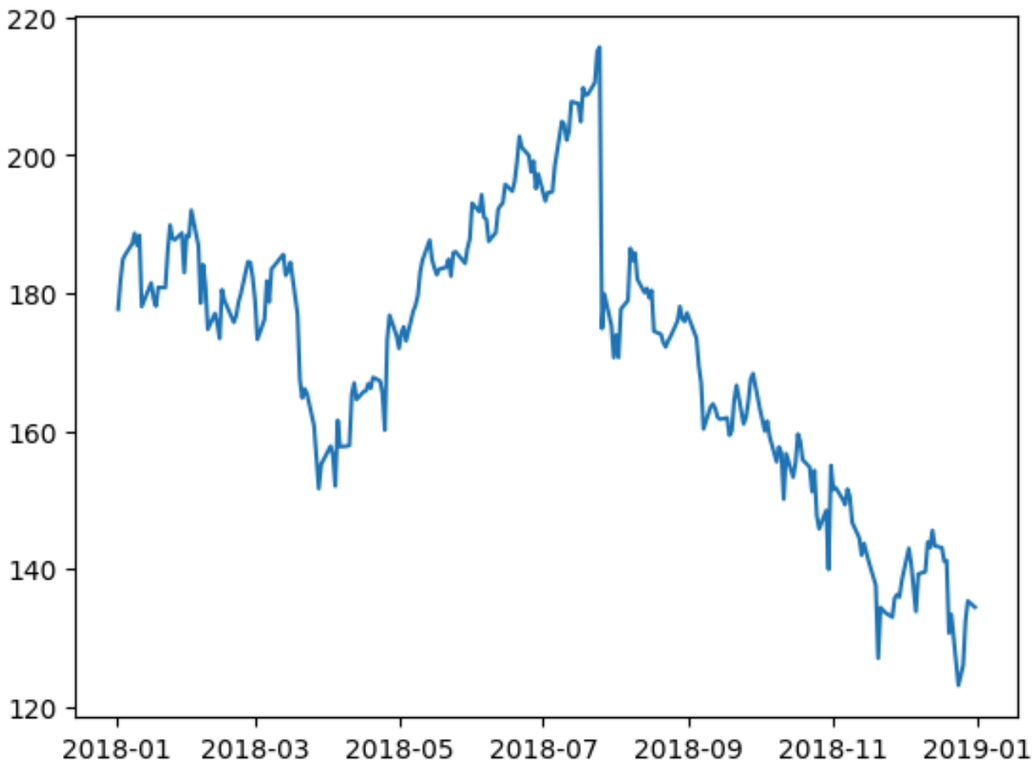
Section: CPE22S3

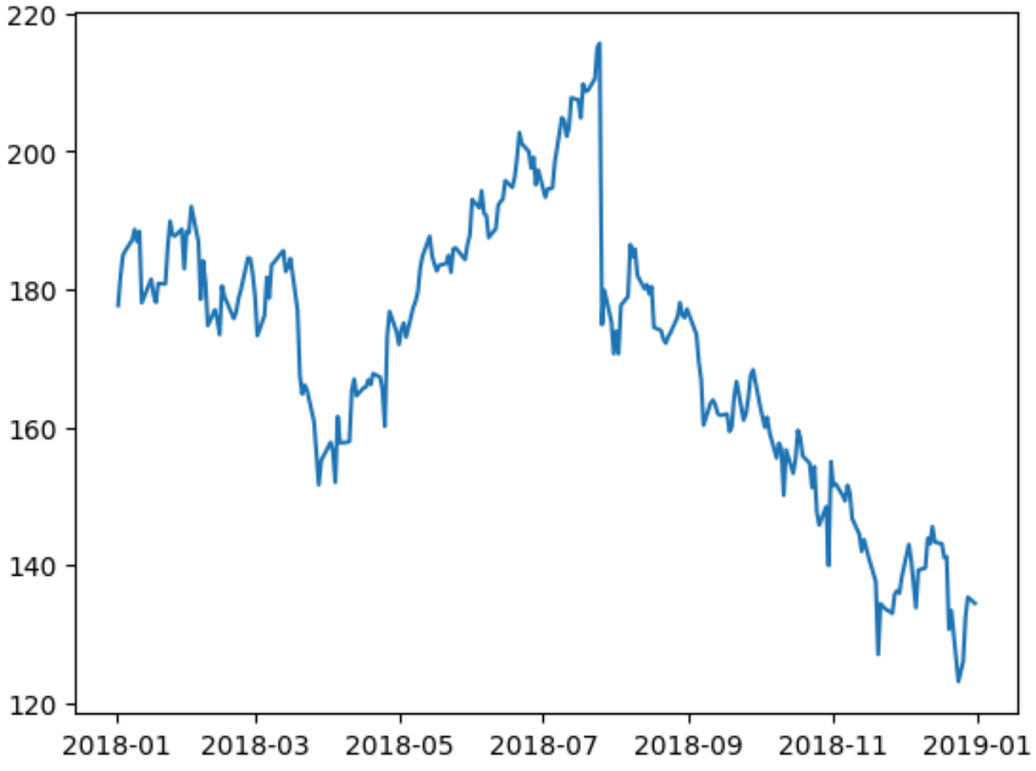
```
import matplotlib.pyplot as plt
import pandas as pd


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

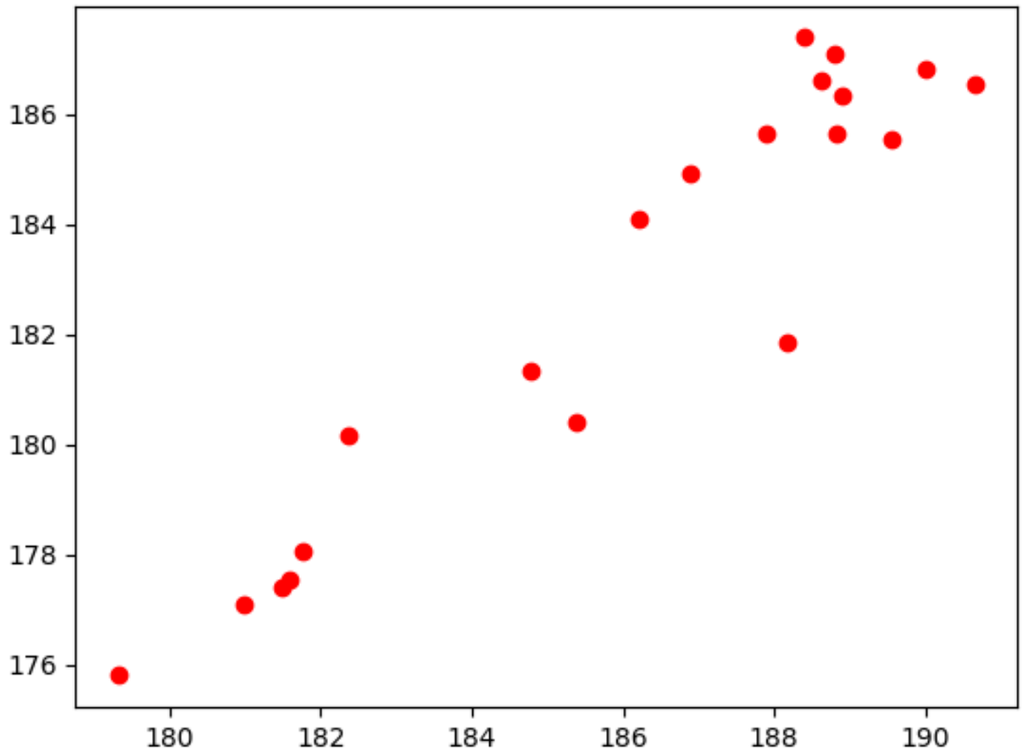
```
[<matplotlib.lines.Line2D at 0x798728bd3d30>]
```



Scatter Plots

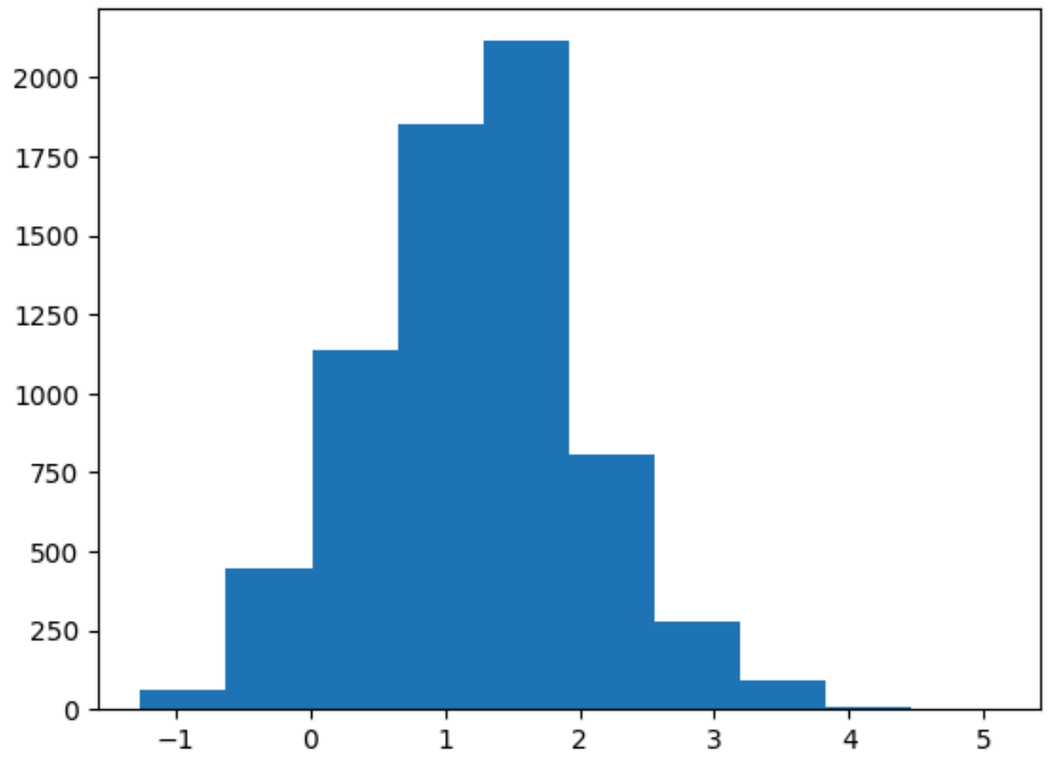
```
plt.plot('high', 'low', 'ro', data=fb.head(20))
```

```
[<matplotlib.lines.Line2D at 0x798728a506a0>]
```



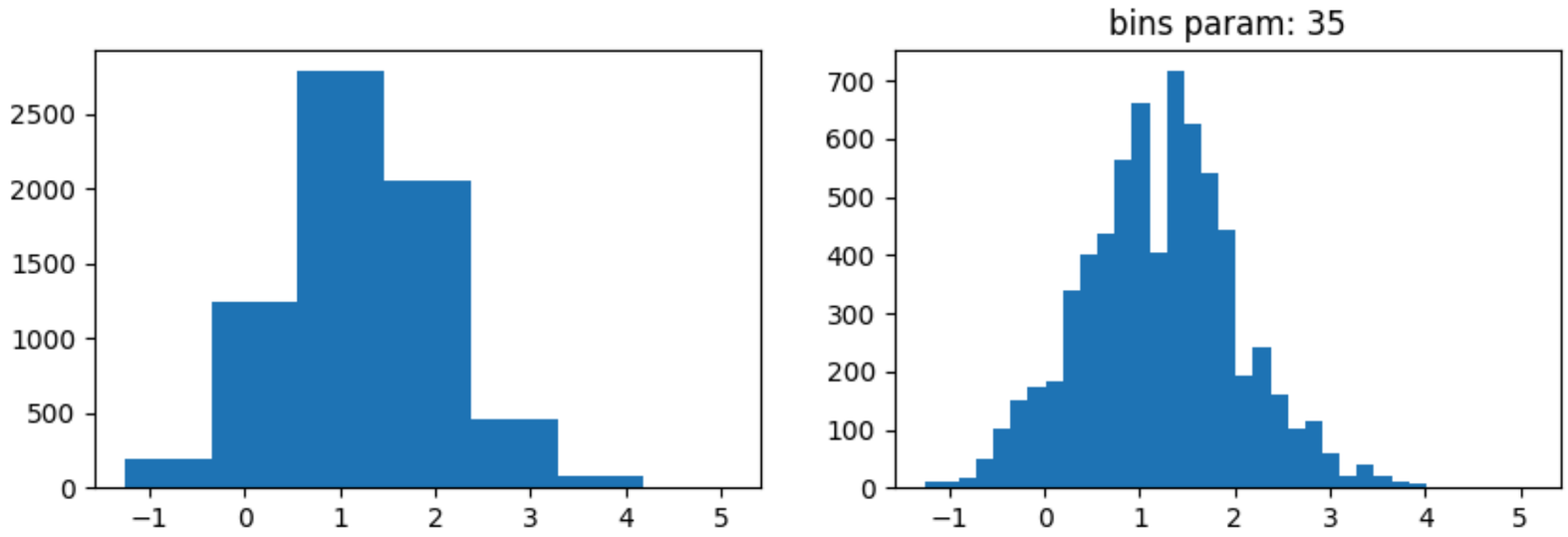

```
quakes = pd.read_csv('data/earthquakes.csv')
plt.hist(quakes.query('magType == "ml"').mag)
```

```
(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>)
```




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

```
Text(0.5, 1.0, 'bins param: 35')
```



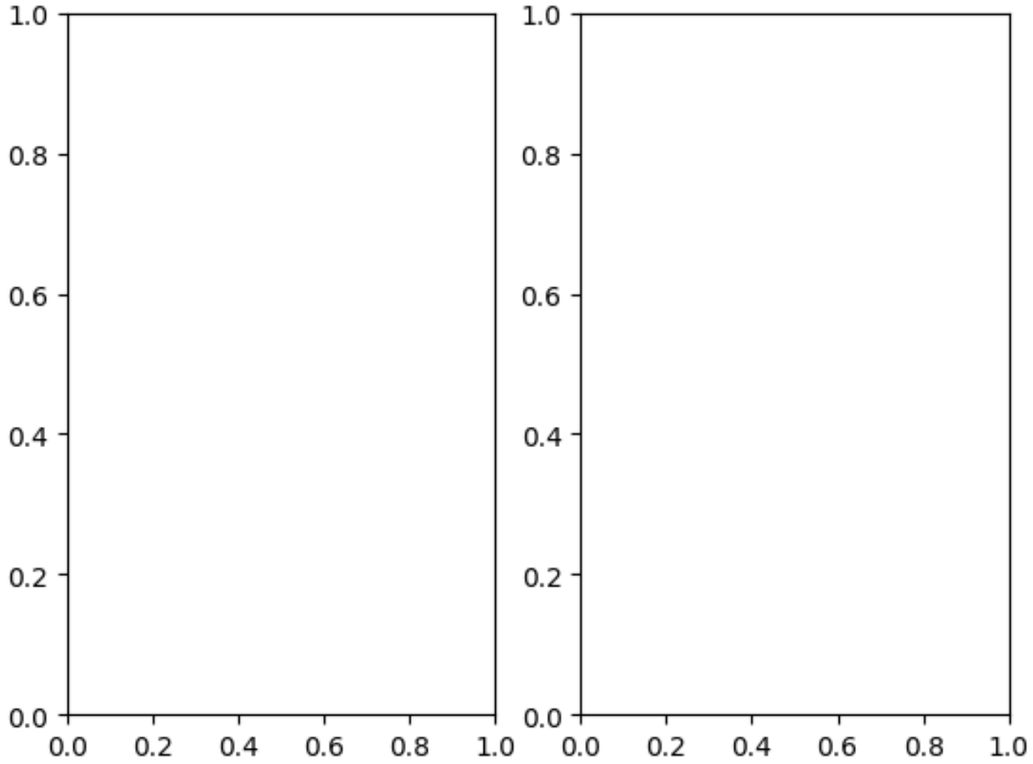
Plot Components

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

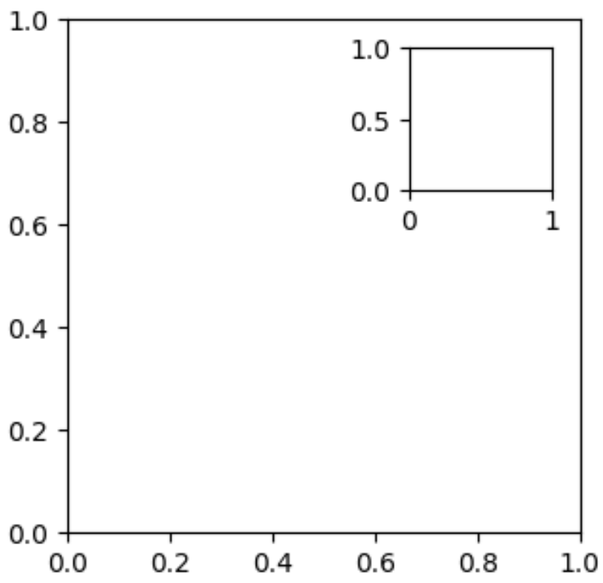
```
<Figure size 640x480 with 0 Axes>
```

Creating Subplots

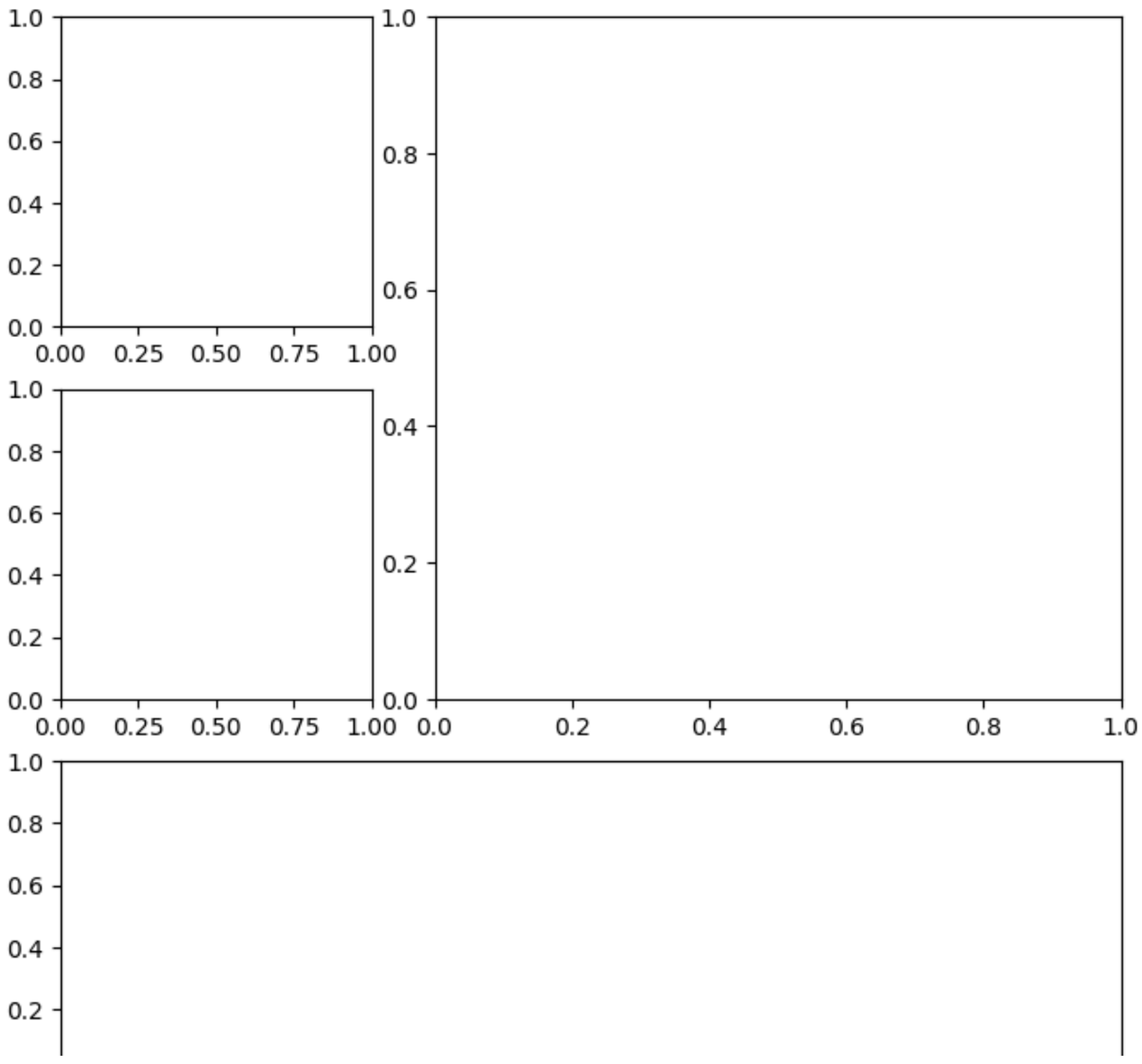
```
fig, axes = plt.subplots(1,2)
```




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



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



Saving Plots

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

Cleaning Up

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

Additional Plotting Options

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

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

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