9.3 Pandas Plotting Subpackage

Pandas provides some extra plotting functions for a few select plot types.

About the Data

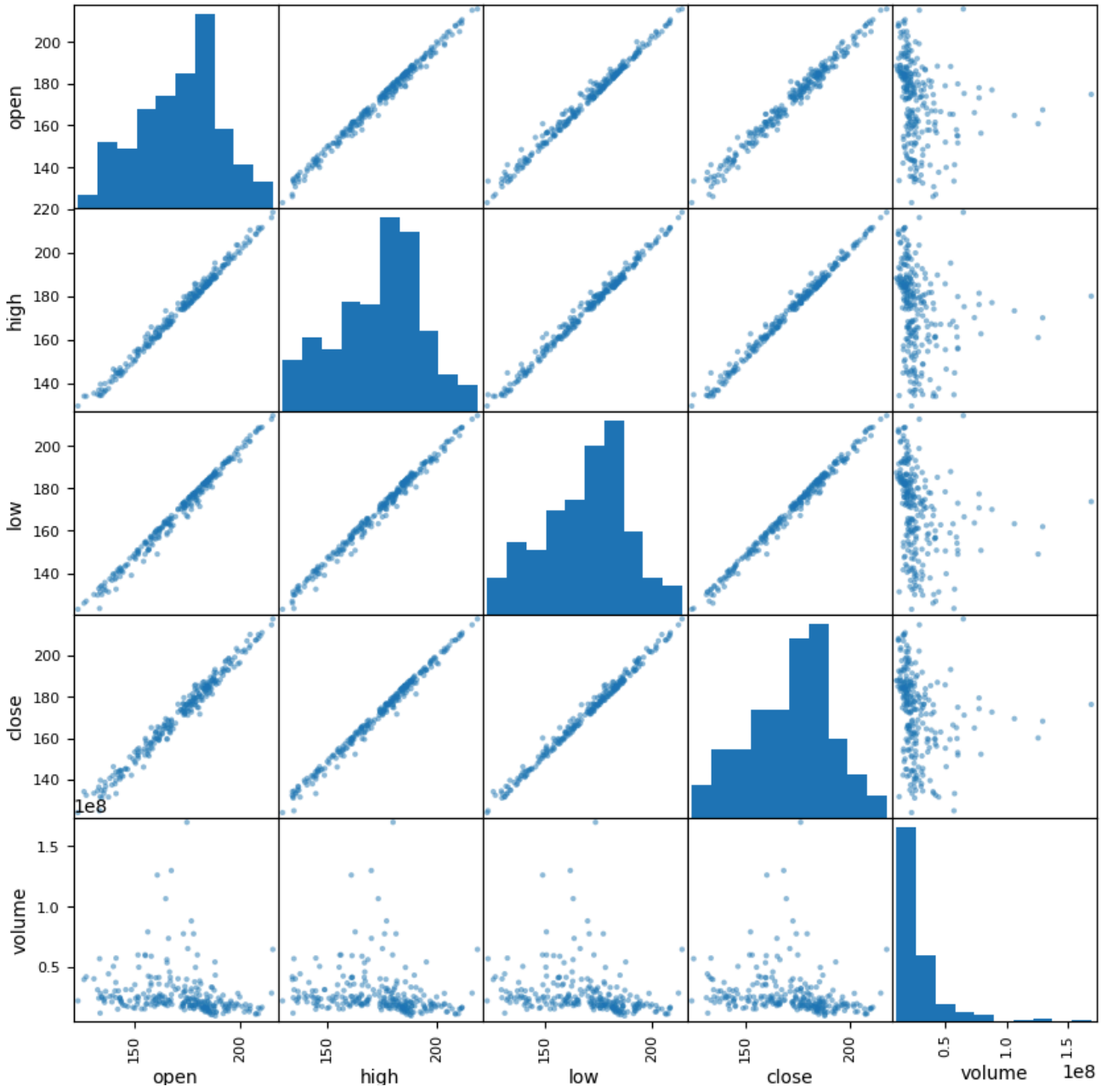
In this notebook, we will be working with Facebook's stock price throughout 2018.

Setup

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

```
from pandas.plotting import scatter_matrix
scatter_matrix(fb, figsize=(10, 10))
```

```
[<Axes: xlabel='open', ylabel='high'>,
 <Axes: xlabel='high', ylabel='high'>,
 <Axes: xlabel='low', ylabel='high'>,
 <Axes: xlabel='close', ylabel='high'>,
 <Axes: xlabel='volume', ylabel='high'>],
[<Axes: xlabel='open', ylabel='low'>,
 <Axes: xlabel='high', ylabel='low'>,
 <Axes: xlabel='low', ylabel='low'>,
 <Axes: xlabel='close', ylabel='low'>,
 <Axes: xlabel='volume', ylabel='low'>],
[<Axes: xlabel='open', ylabel='close'>,
 <Axes: xlabel='high', ylabel='close'>,
 <Axes: xlabel='low', ylabel='close'>,
 <Axes: xlabel='close', ylabel='close'>,
 <Axes: xlabel='volume', ylabel='close'>],
[<Axes: xlabel='open', ylabel='volume'>,
 <Axes: xlabel='high', ylabel='volume'>,
 <Axes: xlabel='low', ylabel='volume'>,
 <Axes: xlabel='close', ylabel='volume'>,
 <Axes: xlabel='volume', ylabel='volume'>]], dtype=object)
```



```
scatter_matrix(fb, figsize=(10, 10), diagonal='kde')
```

```
[<Axes: xlabel='open', ylabel='high'>,
 <Axes: xlabel='high', ylabel='high'>,
 <Axes: xlabel='low', ylabel='high'>,
 <Axes: xlabel='close', ylabel='high'>,
 <Axes: xlabel='volume', ylabel='high'>],
[<Axes: xlabel='open', ylabel='low'>,
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 <Axes: xlabel='low', ylabel='low'>,
 <Axes: xlabel='close', ylabel='low'>,
 <Axes: xlabel='volume', ylabel='low'>],
[<Axes: xlabel='open', ylabel='close'>,
 <Axes: xlabel='high', ylabel='close'>,
 <Axes: xlabel='low', ylabel='close'>,
 <Axes: xlabel='close', ylabel='close'>,
 <Axes: xlabel='volume', ylabel='close'>],
[<Axes: xlabel='open', ylabel='volume'>,
 <Axes: xlabel='high', ylabel='volume'>,
 <Axes: xlabel='low', ylabel='volume'>,
 <Axes: xlabel='close', ylabel='volume'>,
 <Axes: xlabel='volume', ylabel='volume'>]], dtype=object)
```
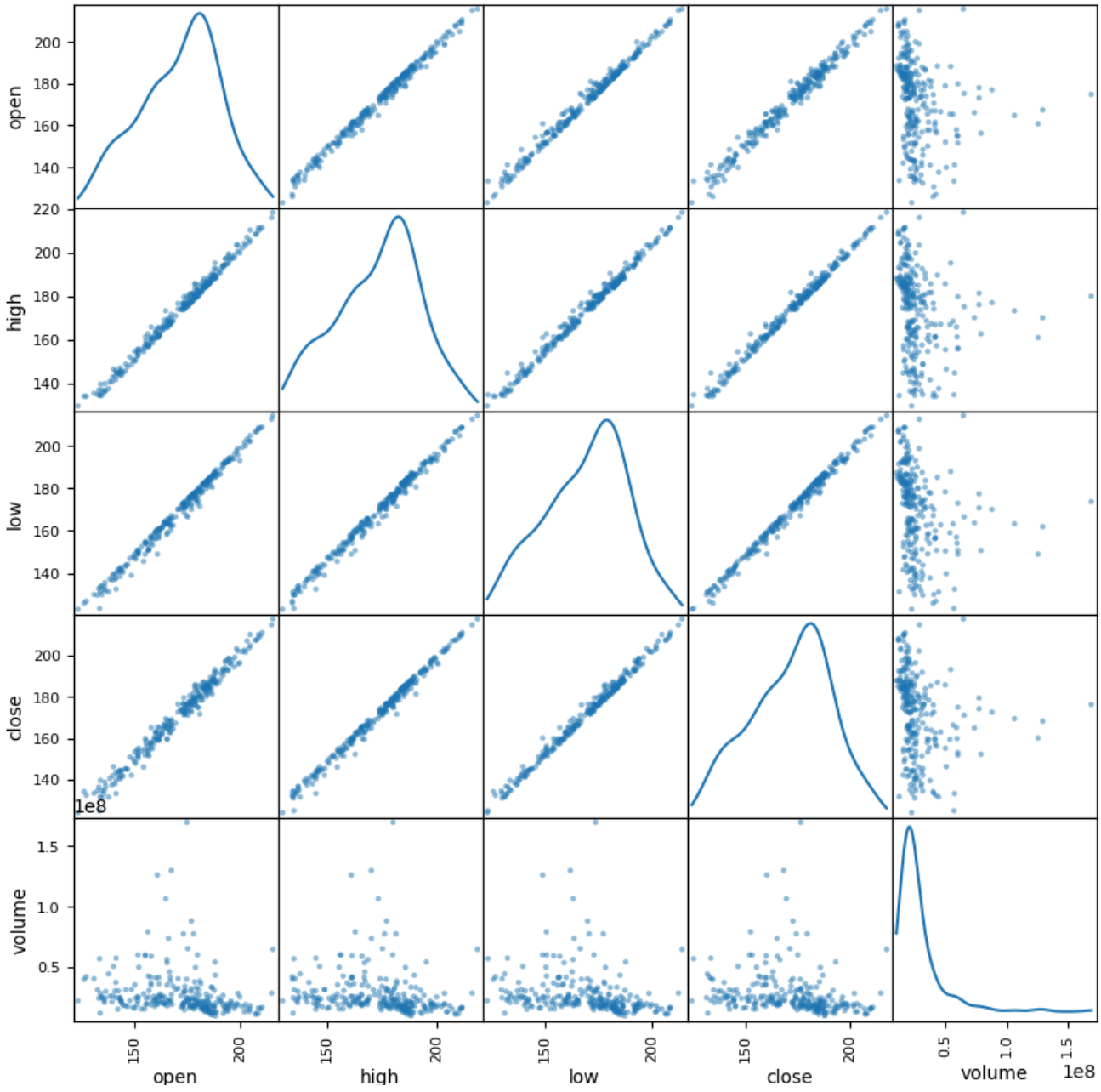
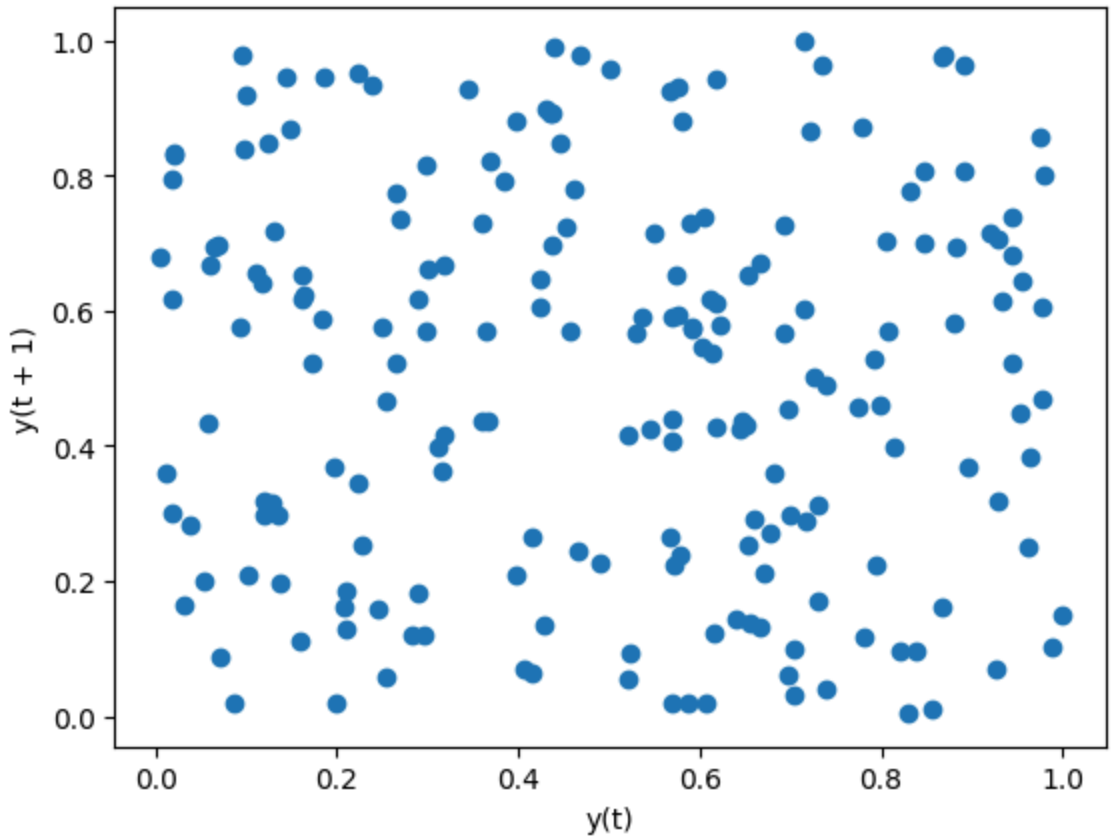



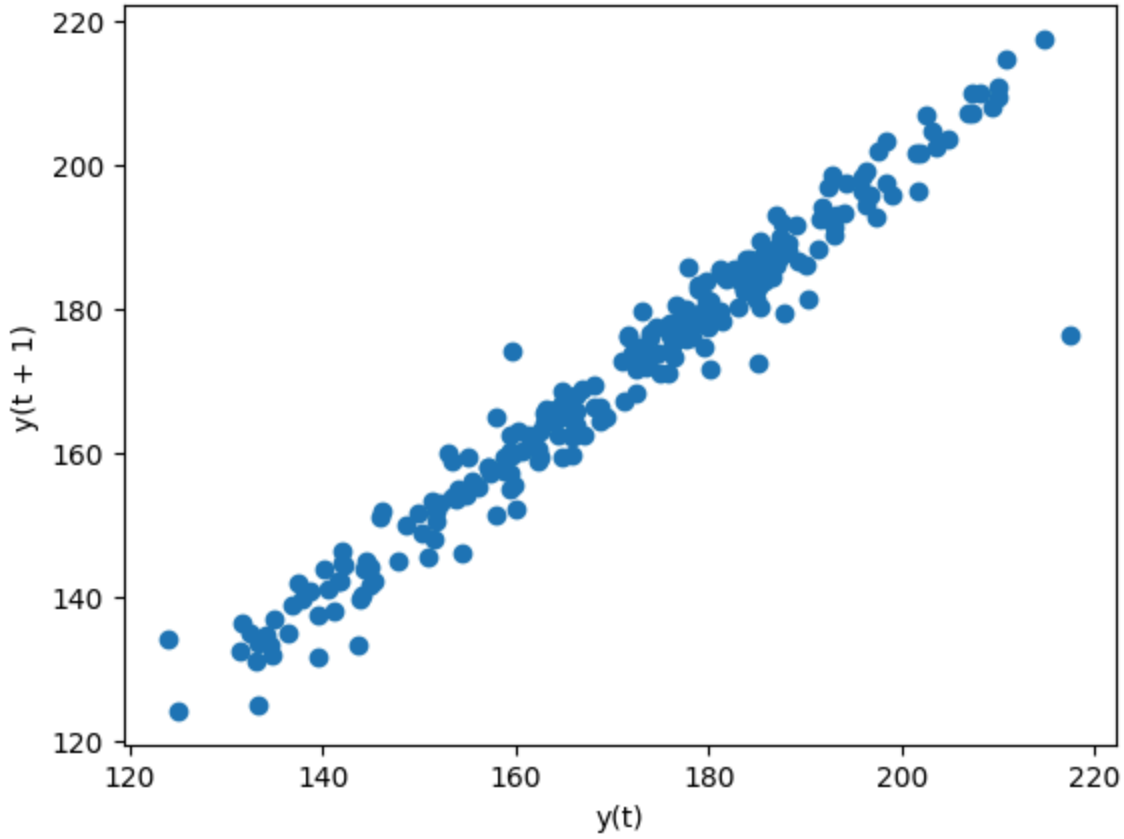
```
from pandas.plotting import lag_plot
np.random.seed(0) # make this repeatable
lag_plot(pd.Series(np.random.random(size=200)))
```

```
<Axes: xlabel='y(t)', ylabel='y(t + 1)'>
```



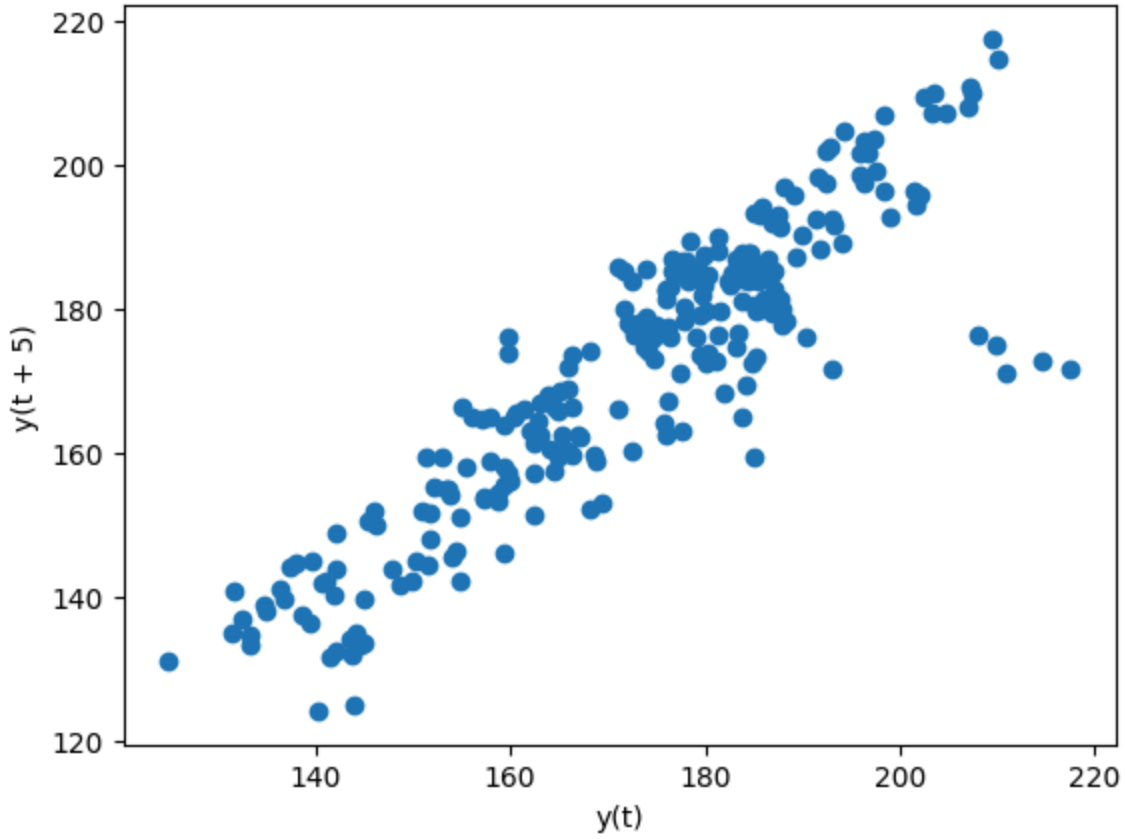

```
lag_plot(fb.close)
```

```
<Axes: xlabel='y(t)', ylabel='y(t + 1)'>
```




```
lag_plot(fb.close, lag=5)
```

```
<Axes: xlabel='y(t)', ylabel='y(t + 5)'>
```




```
from pandas.plotting import autocorrelation_plot
np.random.seed(0) # make this repeatable
autocorrelation_plot(pd.Series(np.random.random(size=200)))
```