Pandas Visualizations and Grid Charts: Takeaways

Syntax

- To generate a histogram using Pandas:

```
Series.plot.hist()
plt.show()
```

- To generate a vertical bar plot using Pandas:

```
Series.plot.bar()
plt.show()
```

- To generate a horizontal bar plot using Pandas:

```
Series.plt.barh() # Horizontal bar plot
plt.show()
```

- To generate a line plot using Pandas(the index of the Series is the x-axis):

```
Series.plot.line()
plt.show()
```

- To generate a line plot using Pandas with a DataFrame:

```
DataFrame.plot.line(x='col_1', y='col_2')
plt.show()
```

- To generate a scatter plot using Pandas:

```
DataFrame.plot.scatter(x='col_1', y='col_2')
plt.show()
```

- To generate a grid chart with two columns and one row:

```
plt.figure(figsize=(8,3))
plt.subplot(1, 2, 1)
plt.subplot(1, 2, 2)
plt.show()
```

- To generate six line plots on a grid chart (two columns by three rows):

```
plt.figure(figsize=(10,12))
for i in range(1, 7):
    plt.subplot(3, 2, i)
    plt.plot(x_coordinates, y_coordinates)
plt.show()
```

Concepts

- We can generate graphs more quickly using Pandas visualization methods.
- Behind the curtains, Pandas uses Matplotlib to generate the graphs. This allows us to use Matplotlib code to customize the visualizations generated.

- A grid chart (also known as small multiples) is a collection of similar graphs that usually share the same x- and y-axis range.
- The main purpose of a grid chart is to ease comparison.

Resources

- A thorough introduction to Pandas visualization methods
- A Wikipedia article on grid charts