Pandas - Plotting

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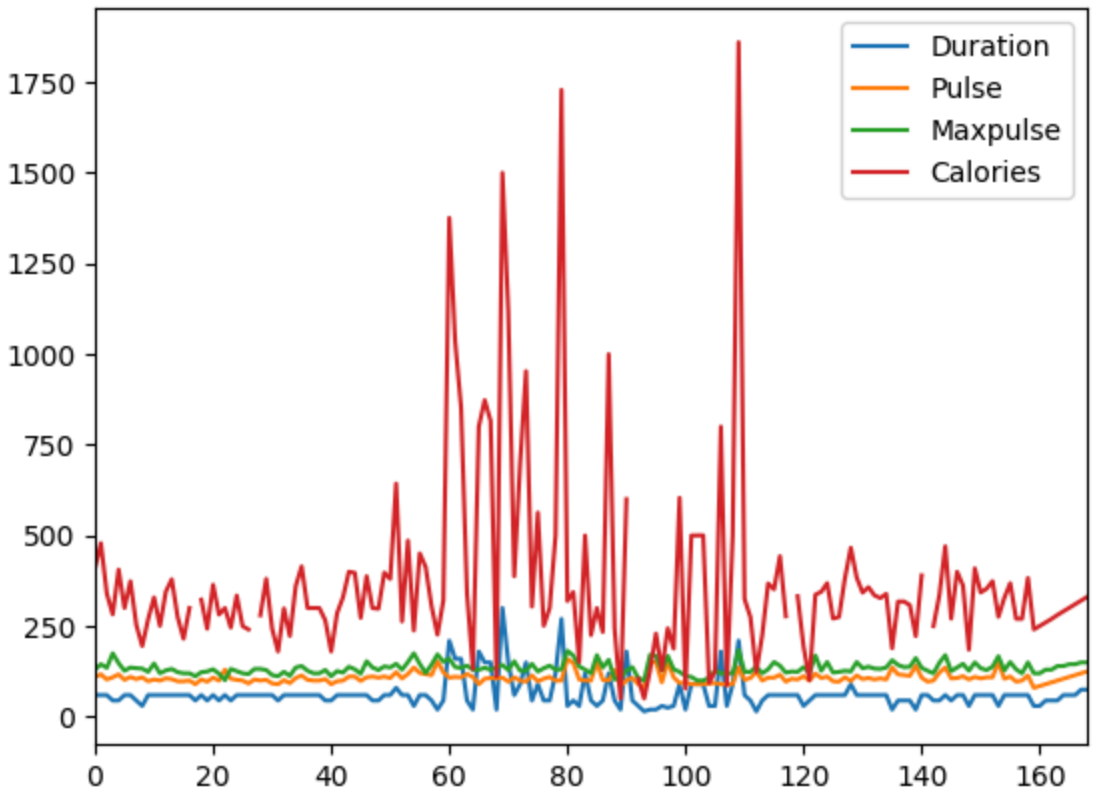


Plotting

Pandas uses the `plot()` method to create diagrams.

Example

Get your own Python Server

Import pyplot from Matplotlib and visualize our DataFrame:

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

df = pd.read_csv('data.csv')

df.plot()

plt.show()
```

Try it Yourself »

The examples in this page uses a CSV file called: 'data.csv'.

Download data.csv or Open data.csv

Scatter Plot

Specify that you want a scatter plot with the `kind` argument:

```
kind = 'scatter'
```

A scatter plot needs an x- and a y-axis.

In the example below we will use "Duration" for the x-axis and "Calories" for the y-axis.

Include the x and y arguments like this:

```
x = 'Duration', y = 'Calories'
```

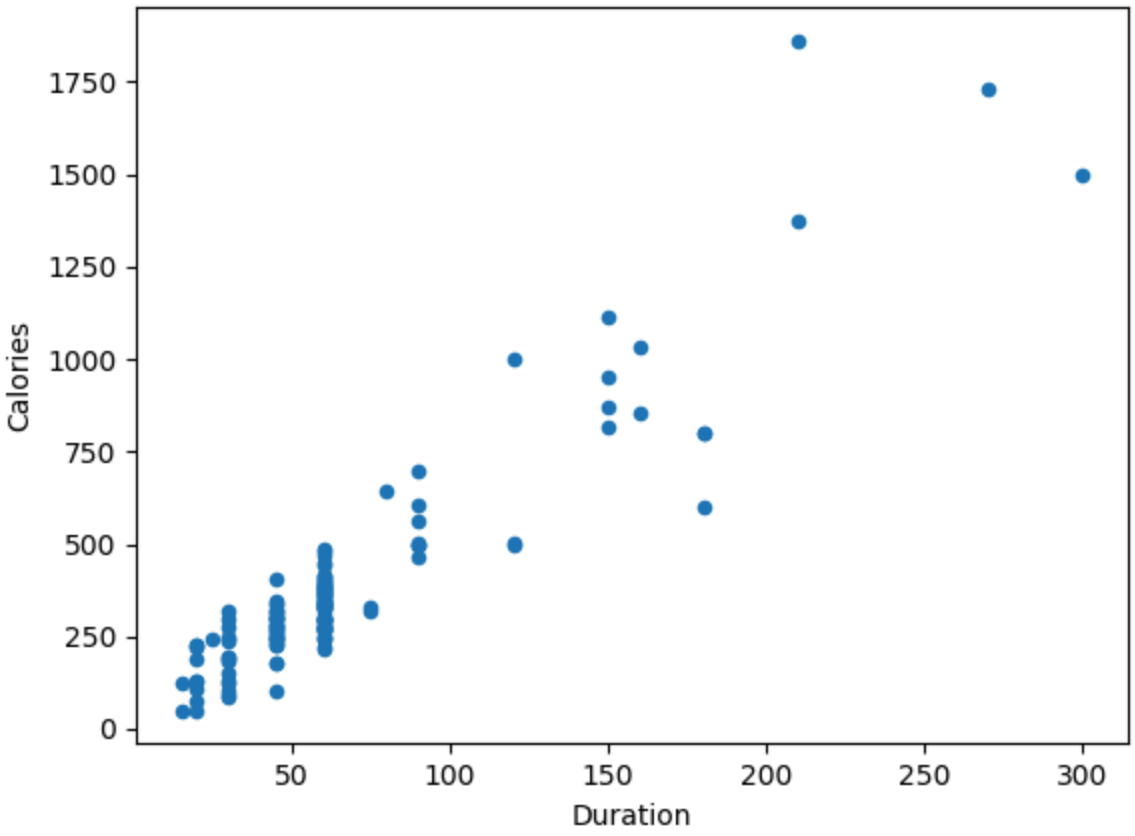
```
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv('data.csv')

df.plot(kind = 'scatter', x = 'Duration', y = 'Calories')

plt.show()
```

Result



Try it Yourself »

By looking at the scatterplot, I will agree.

Let's create another scatterplot, where there is a bad relationship between the columns, like "Duration" and "Maxpulse", with the correlation `0.009403` :

Example

A scatterplot where there are no relationship between the columns:

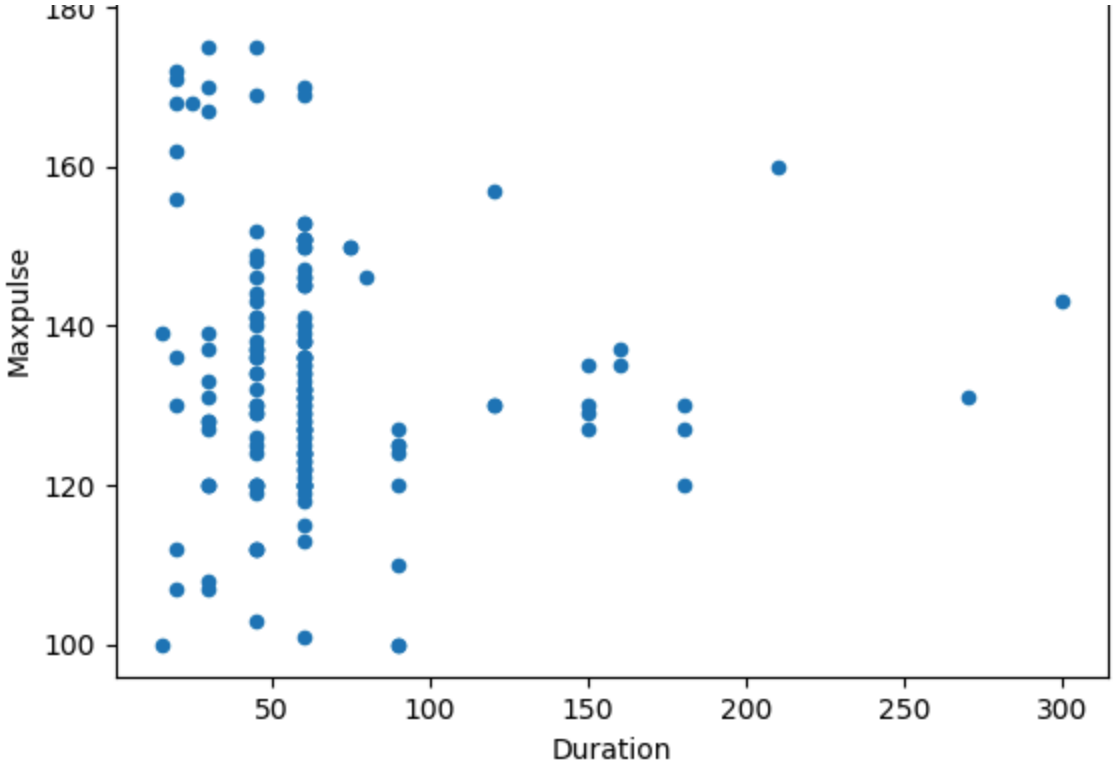
```
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv('data.csv')

df.plot(kind = 'scatter', x = 'Duration', y = 'Maxpulse')

plt.show()
```

Result



Try it Yourself »

```
kind = 'hist'
```

A histogram needs only one column.

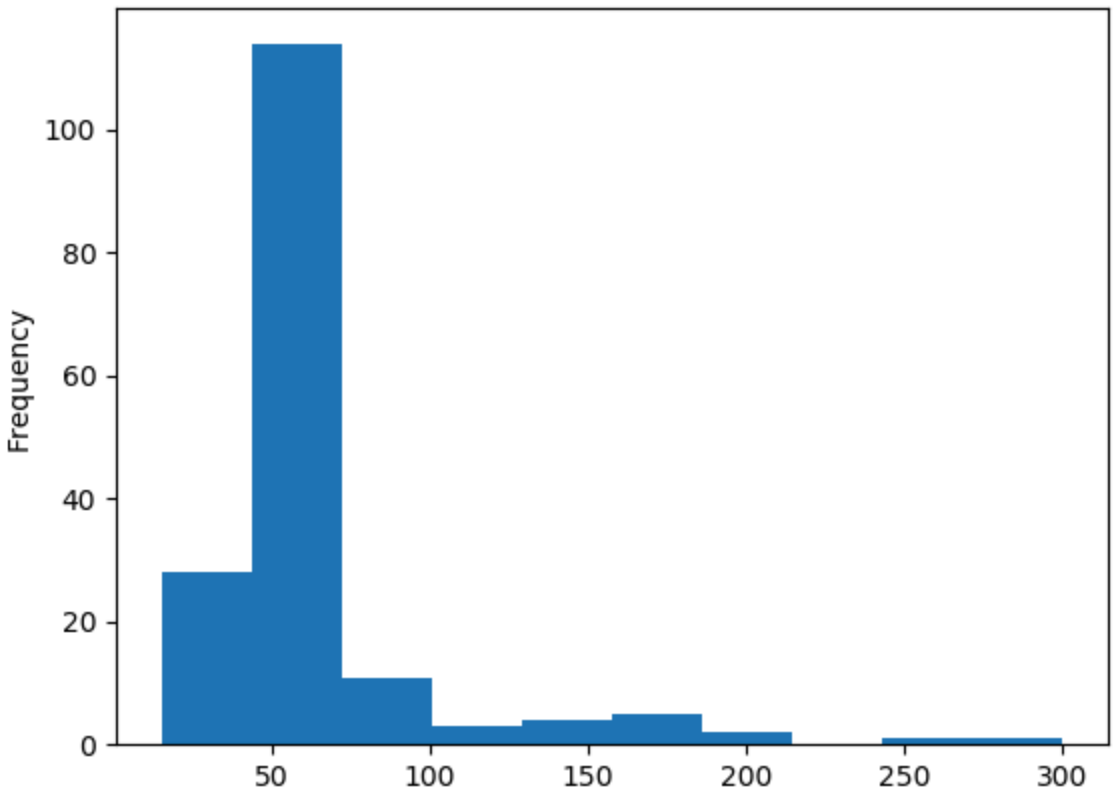
A histogram shows us the frequency of each interval, e.g. how many workouts lasted between 50 and 60 minutes?

In the example below we will use the "Duration" column to create the histogram:

Example

```
df["Duration"].plot(kind = 'hist')
```

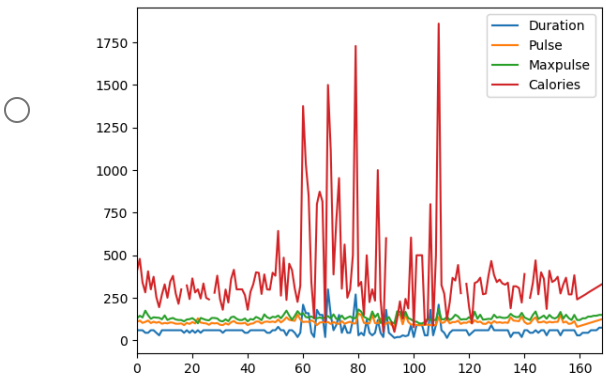
Result

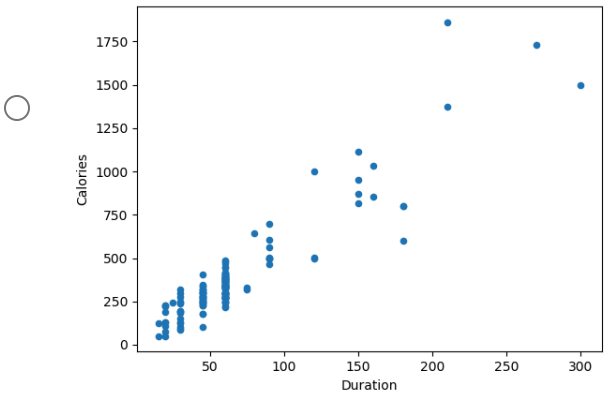


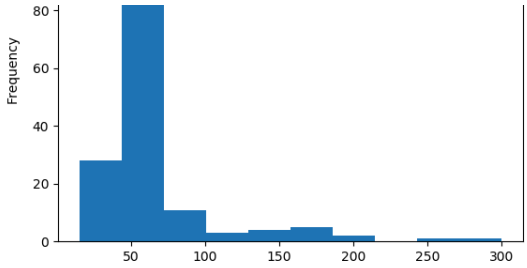
Note: The histogram tells us that there were over 100 workouts that lasted between 50 and 60 minutes.

Exercise ?

Which one of the following plots is a Scatter Plot?







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