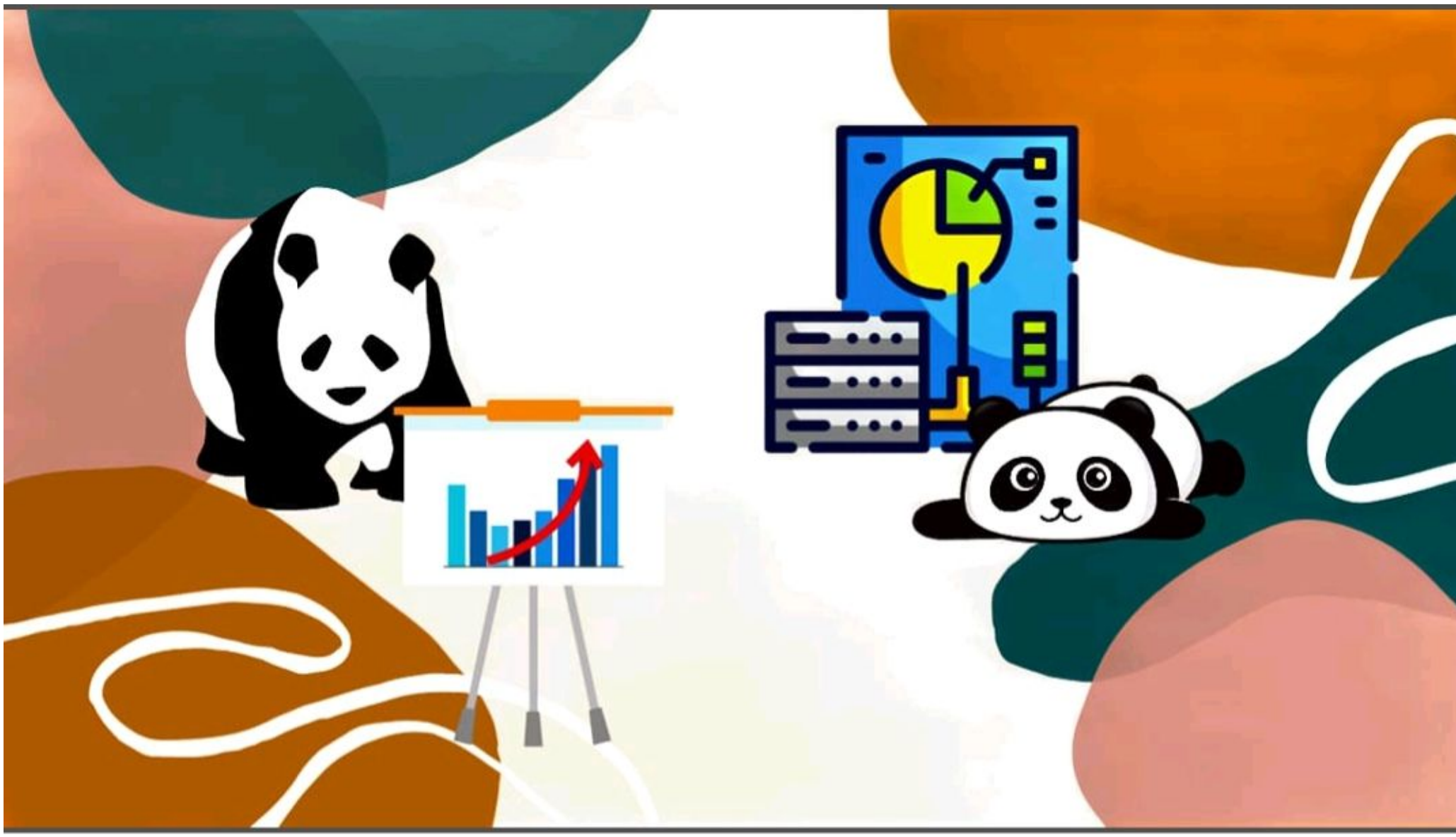
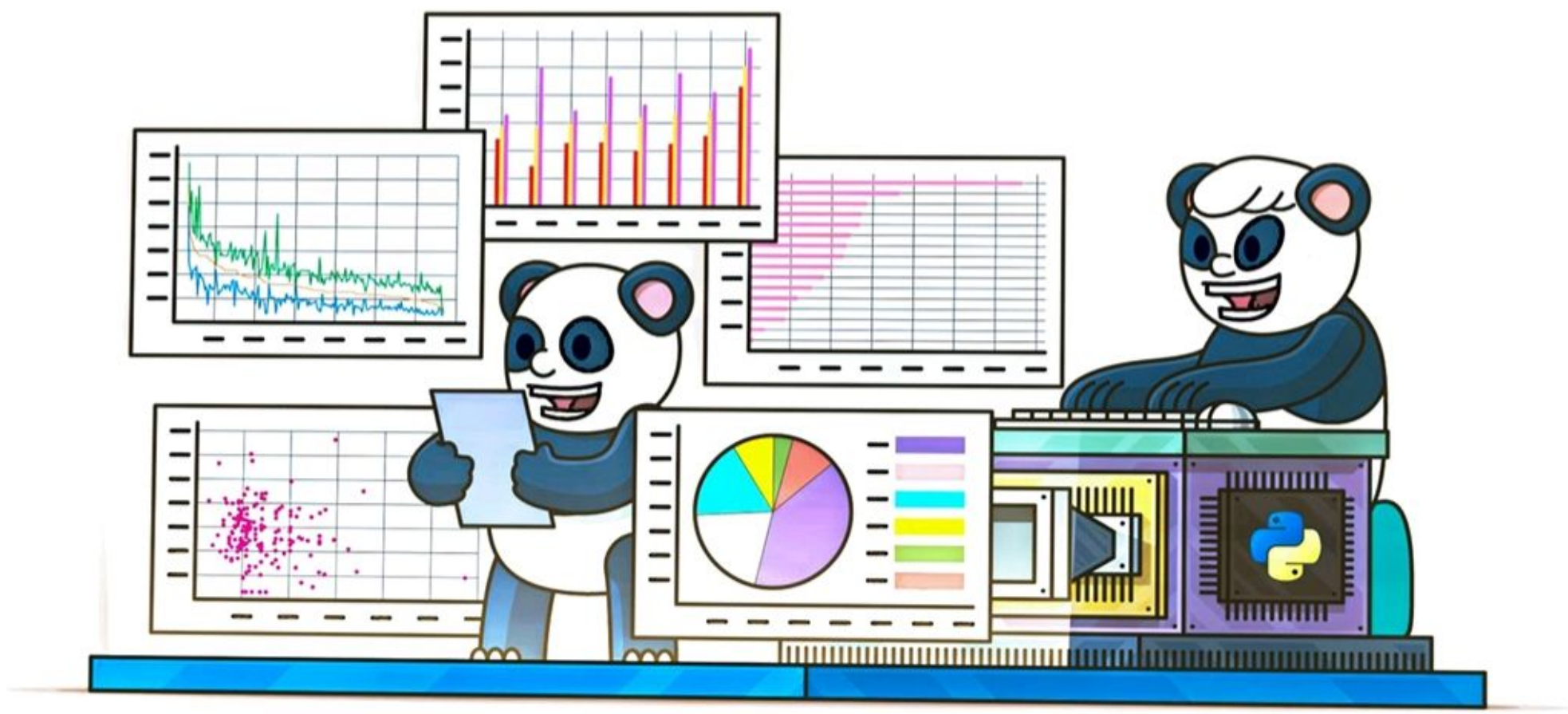
Data Visualisation With Pandas





Data Visualization with Pandas

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

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

```
df.head(3)
```

	Duration	Pulse	Maxpulse	Calories
0	60	110	130	409.1
1	60	117	145	479.0
2	60	103	135	340.0

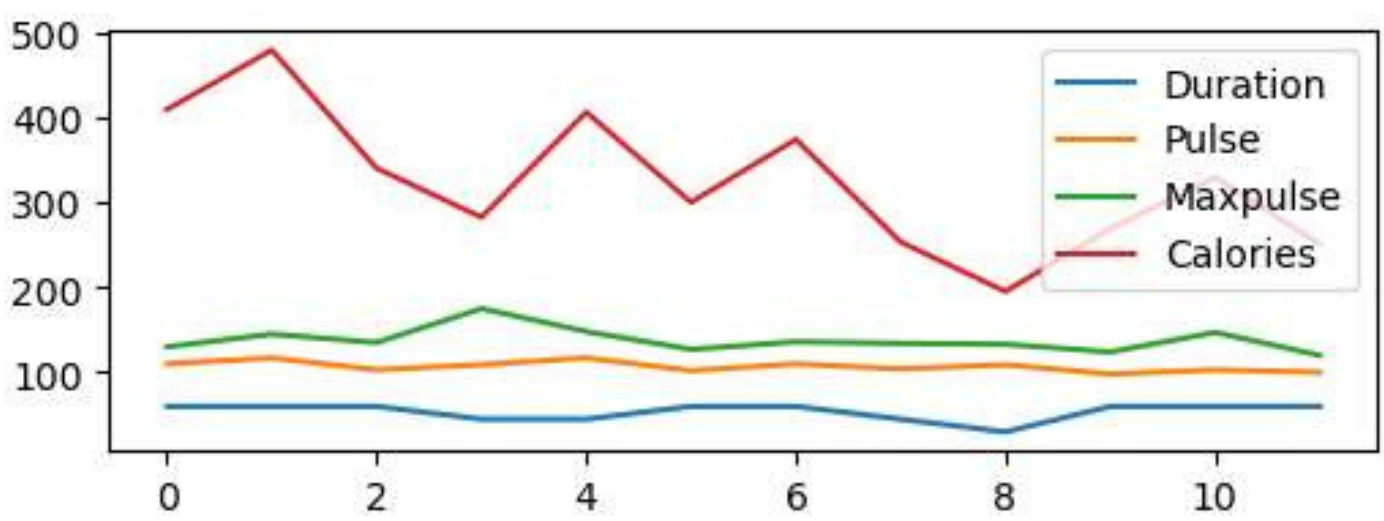
plot()

- It makes charts – defaults is line plot
- More graphs with kind='line','bar','scatter','hist',etc

Line Plot

syntax: plot() or plot.line()

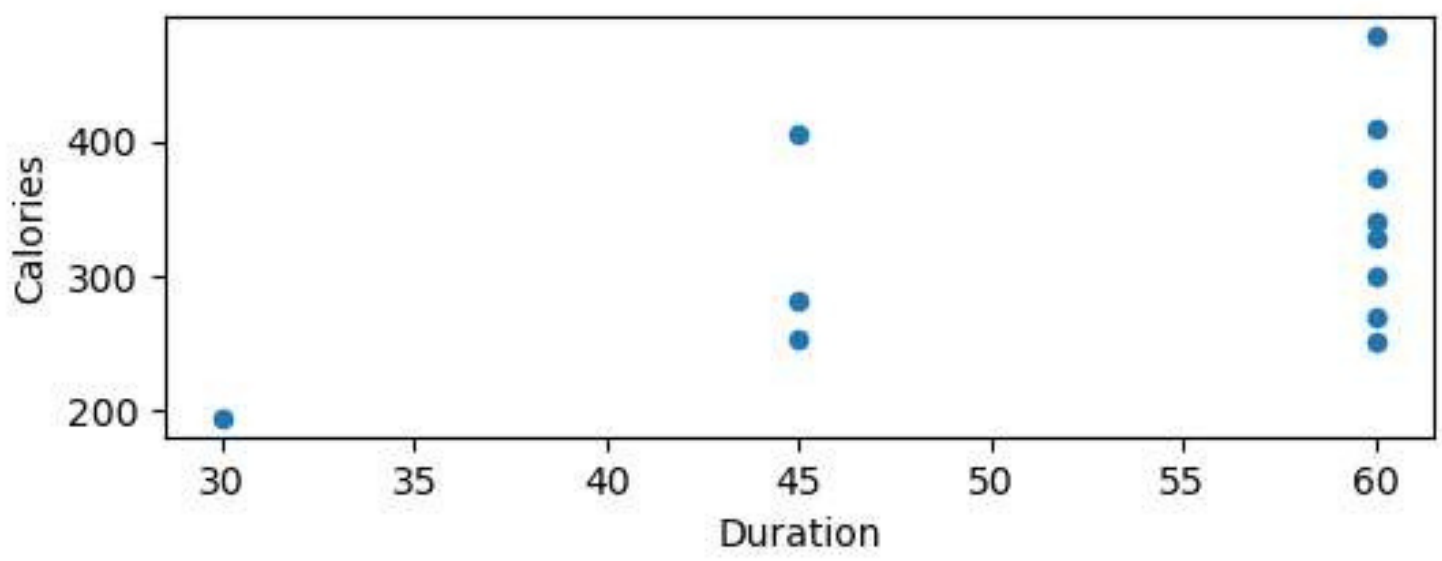
```
df.plot()
```



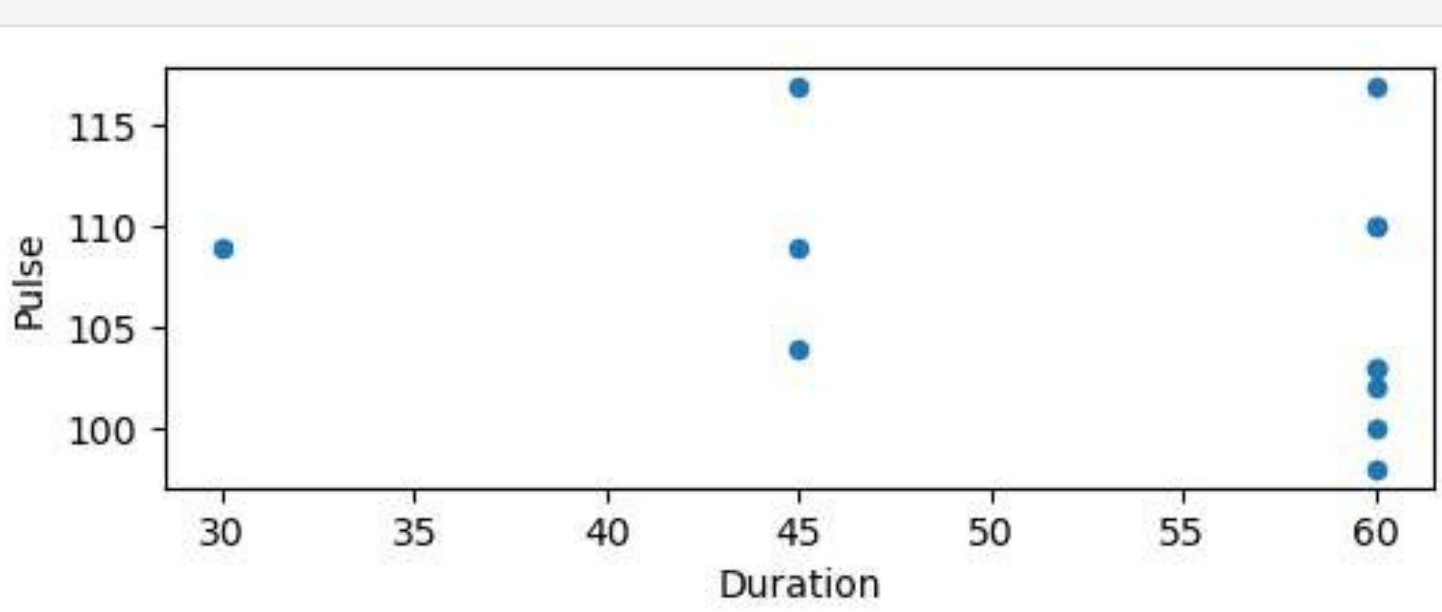
Scatter Plot

syntax: plot(kind='scatter',x,y) or plot.scatter(x,y)

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



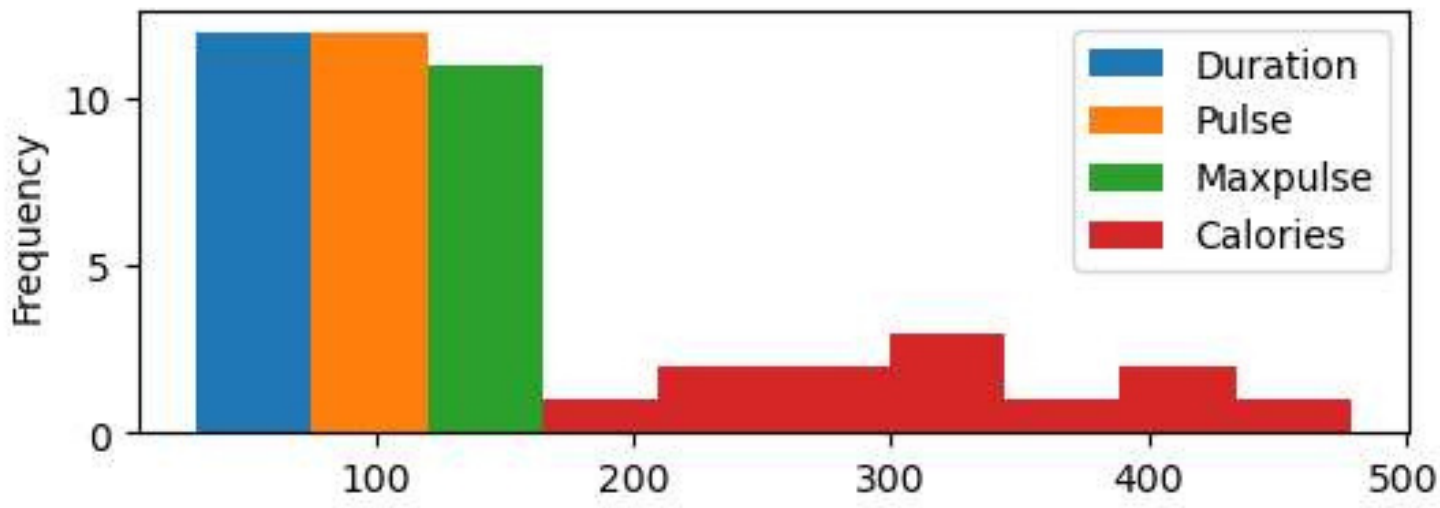

```
df.plot.scatter(x='Duration',y='Pulse')
```



Histogram

syntax: plot(kind='hist') or plot.hist()

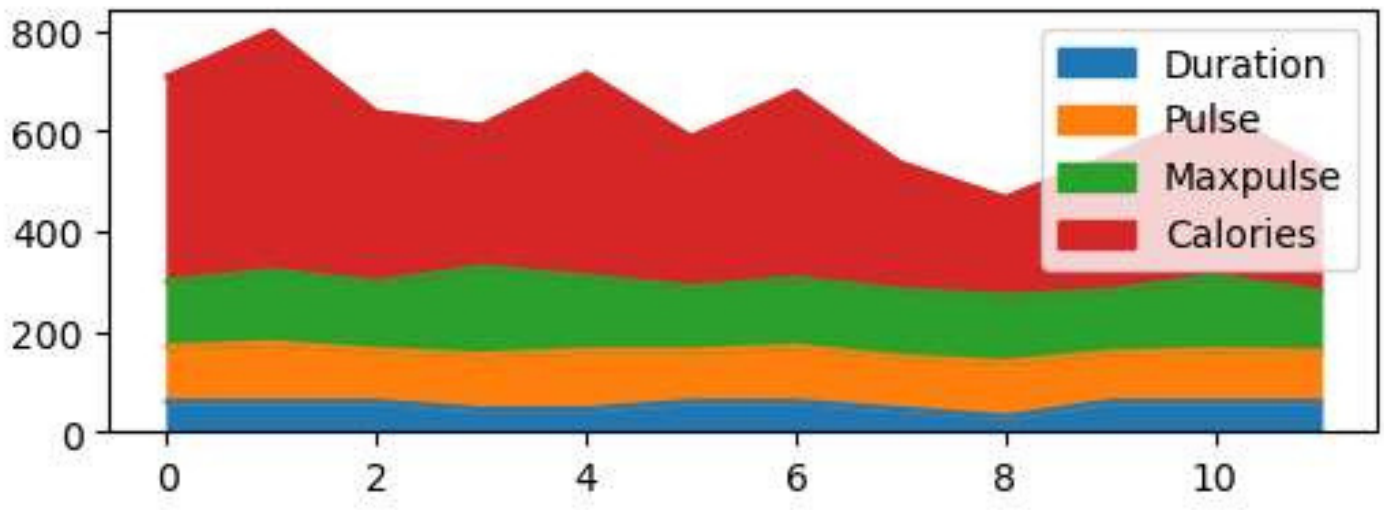
```
df.plot(kind = 'hist')

# df.plot.hist()
```



Area Plot

syntax: plot(kind='area') or plot.area()

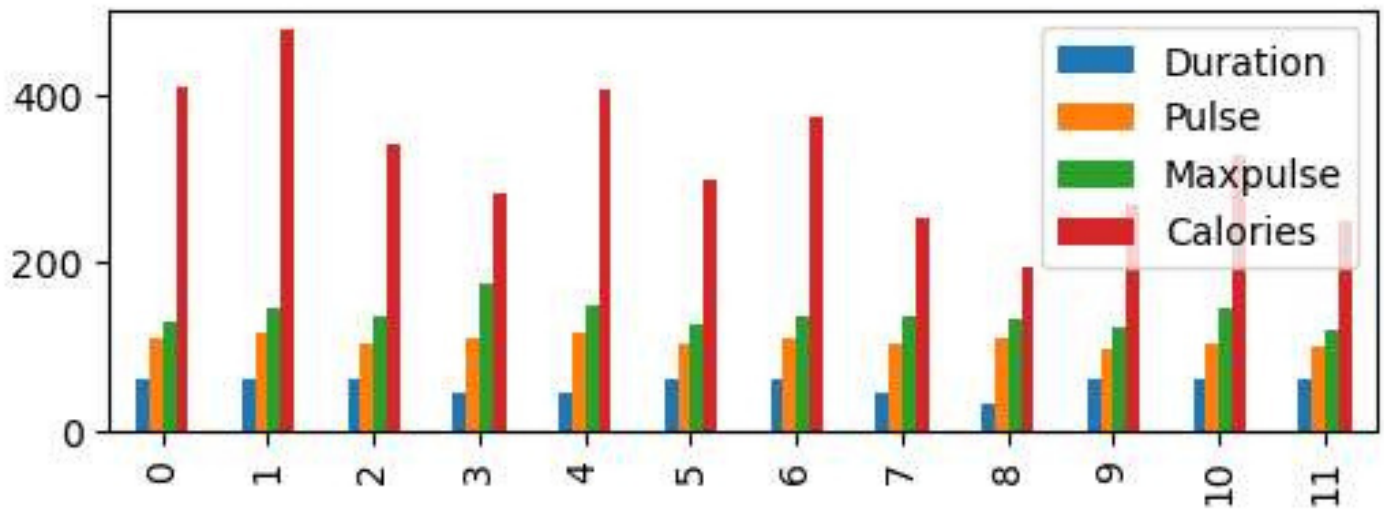
```
df.plot.area()
```



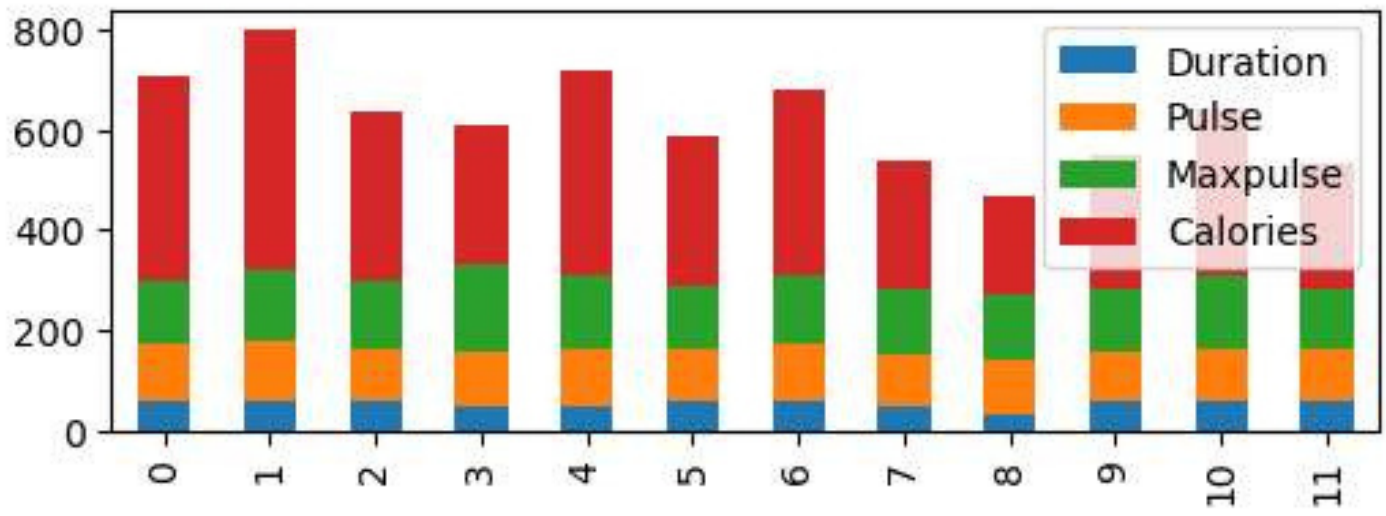
Bar Chart

syntax: plot(kind='bar') or plot.bar()
barh() for horizontal bar

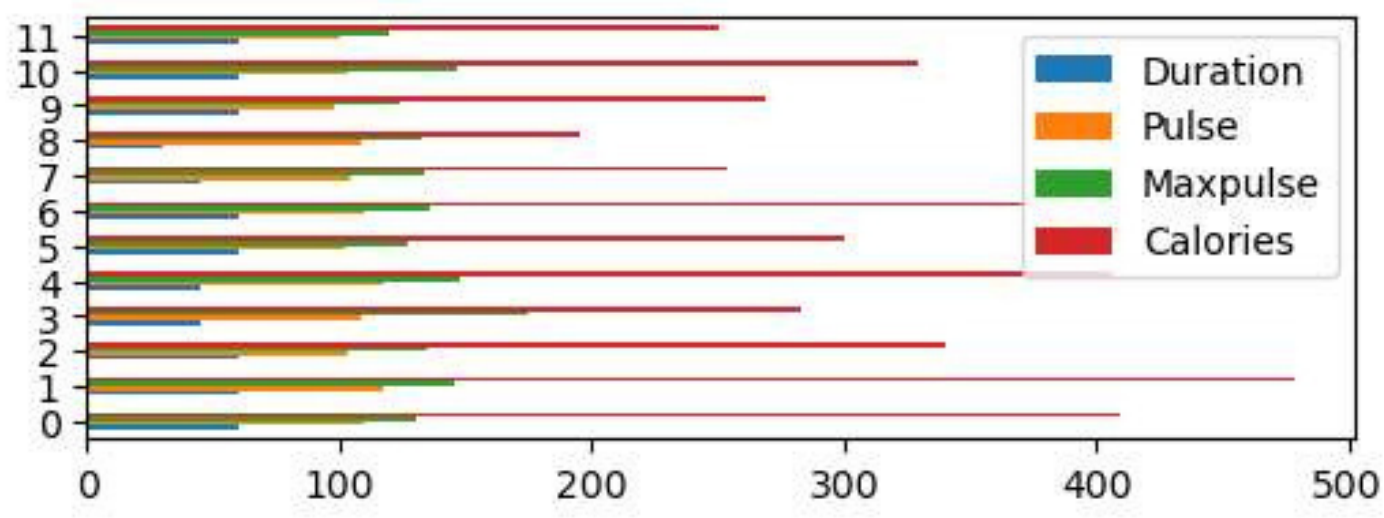
```
df.plot.bar()
```



```
df.plot.bar(stacked=True)
```



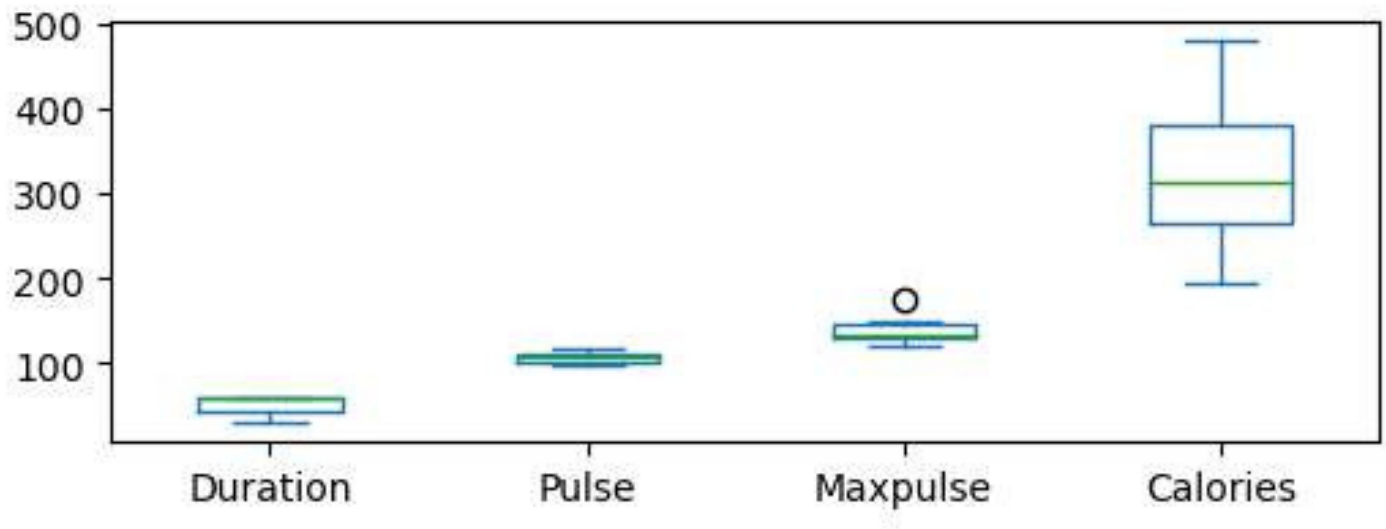

```
# horizontal bar
df.plot.barh()
```



Box plot

syntax: plot(kind='box') or plot.box()

```
df.plot.box()
```

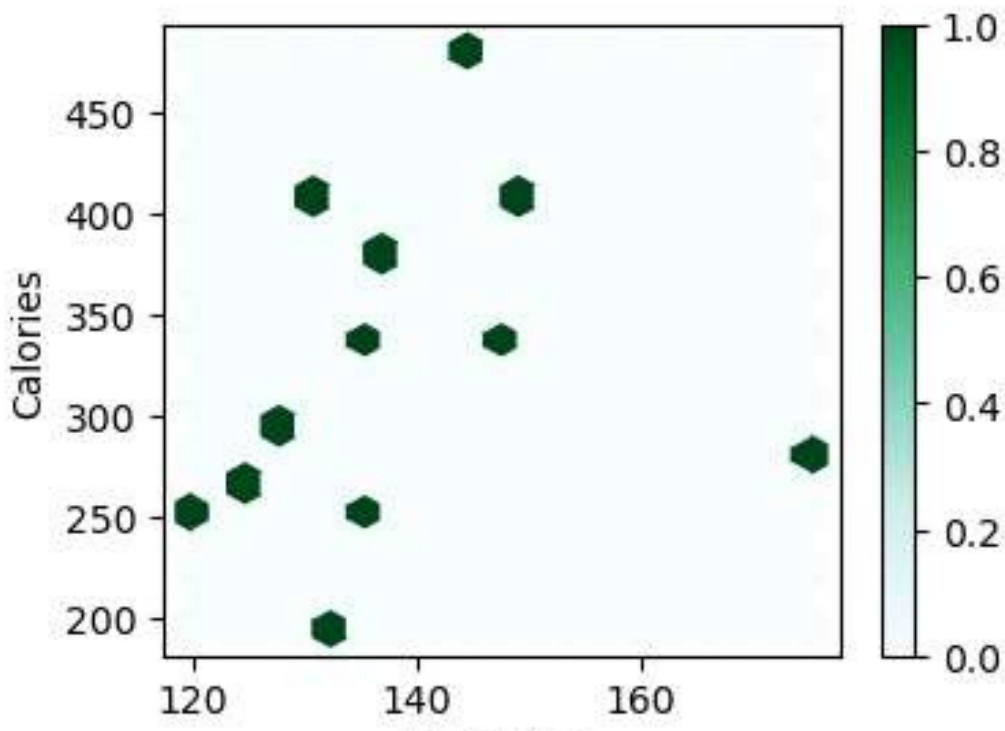


hexagonal binning plot

plot.hexbin()

```
df.plot.hexbin(x='Maxpulse',y='Calories',
                gridsize=18)
```

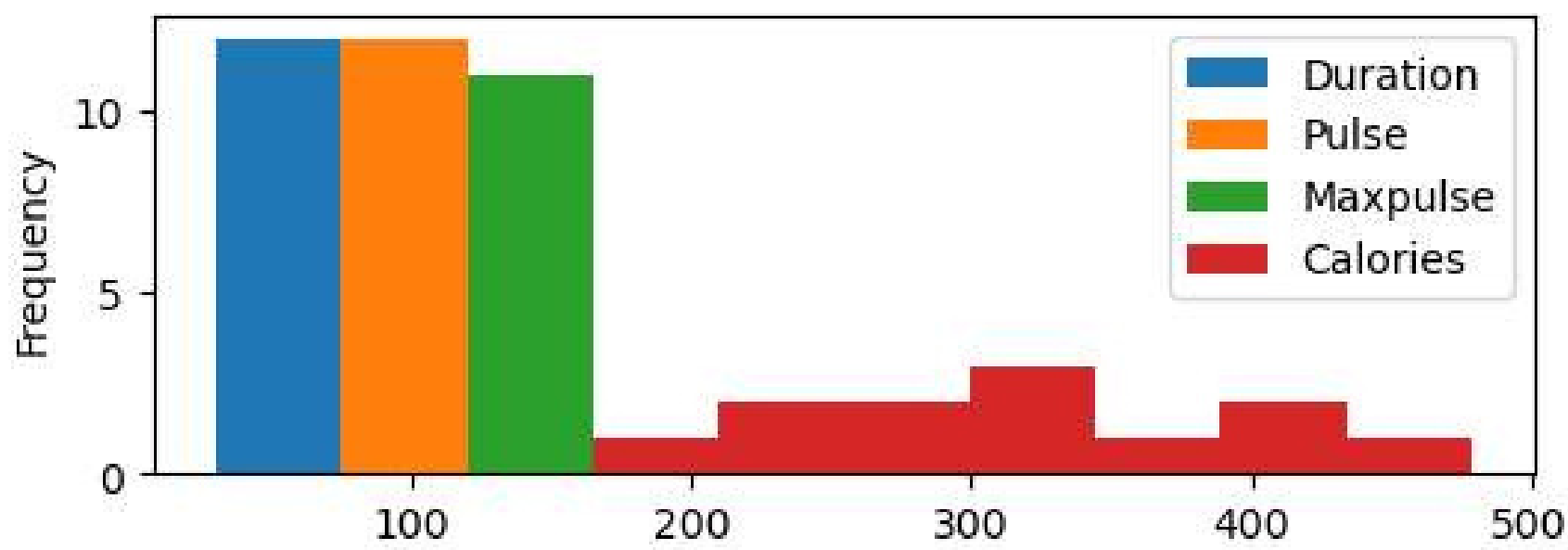
```
<Axes: xlabel='Maxpulse', ylabel='Calories'>
```



histogram plot

plot.hist()

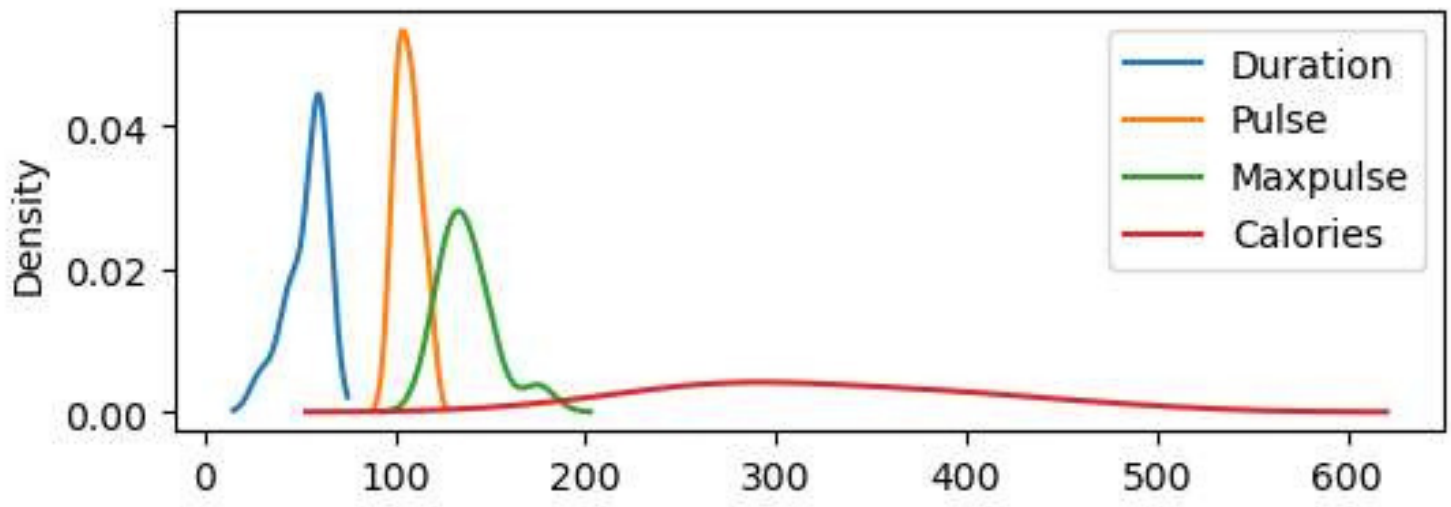
```
df.plot.hist()
```



Density Estimate plot

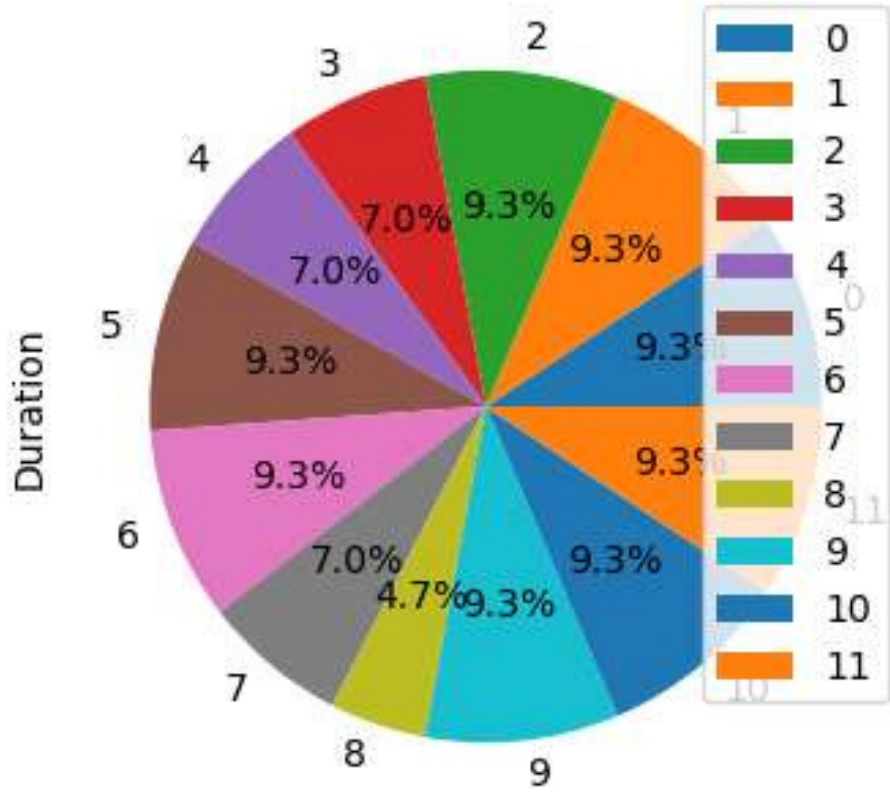
plot.kde() or plot.density()
kernel density estimate charts

```
df.plot.kde()
```



Pie plot pie.plot()

```
df.plot.pie(y='Duration',autopct='%1.1f%%')
```



Save the plot as an image | savefig()

```
df.plot()
plt.savefig('lineplot.png')
```

Thank You