Chapter 7 - Collaborative Analytics with Plotly

Segment 2 - Creating statistical charts

Setting up to use Plotly within Jupyter

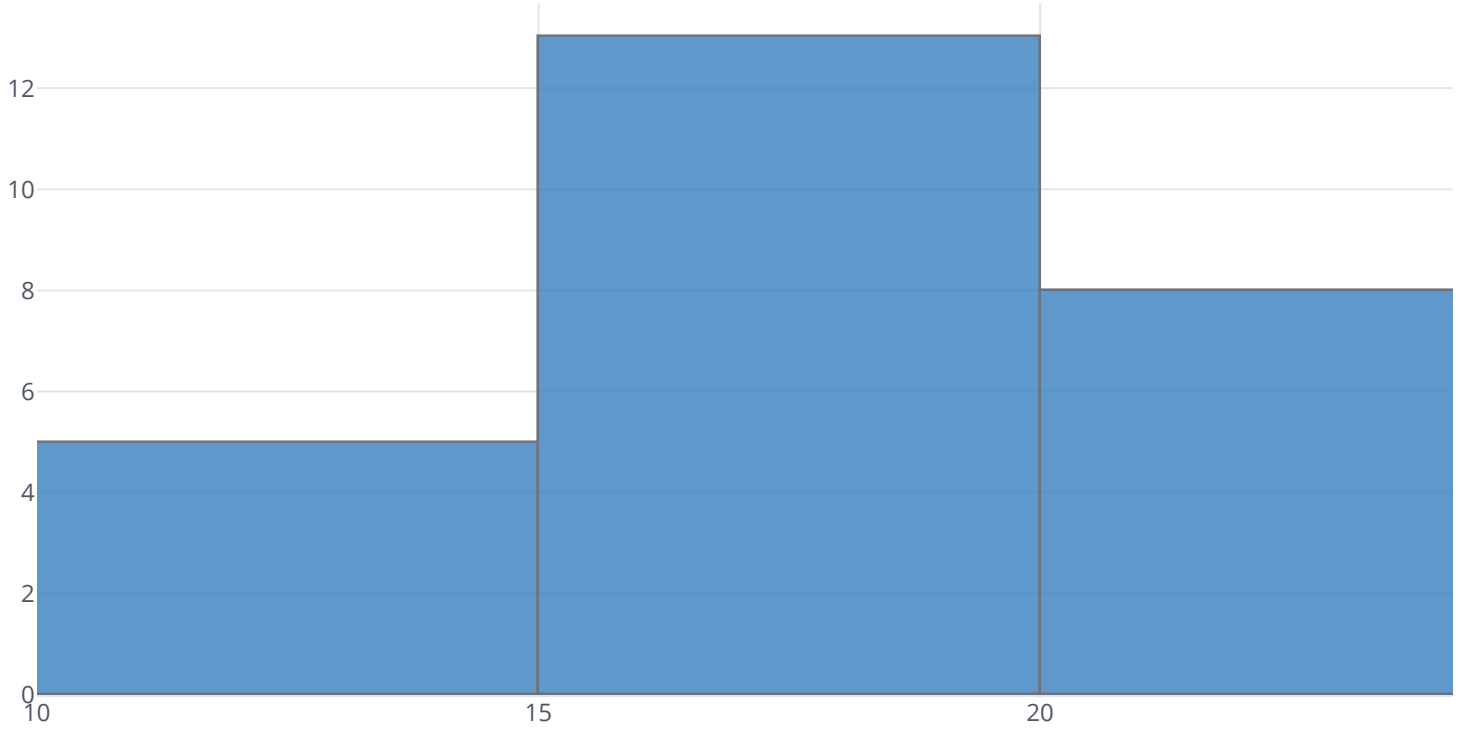
```
import numpy as np
import pandas as pd

import cufflinks as cf

import plotly.plotly as py
import plotly.tools as tls
import plotly.graph_objs as go

import sklearn
from sklearn.preprocessing import StandardScaler
import sklearn
from sklearn.preprocessing import StandardScaler


tls.set_credentials_file(username='', api_key='')
```

Creating histograms

Make a histogram from a pandas Series object

```
address = 'C:/Users/Lillian/Desktop/ExerciseFiles/Data/mtcars.csv'

cars = pd.read_csv(address)
cars.columns = ['car_names','mpg','cyl','disp', 'hp', 'drat', 'wt', 'qsec', 'vs', 'am', 'gear', 'carb']

mpg = cars.mpg

mpg.iplot(kind='histogram', filename='simple-histogram-chart')
cars.mpg.iplot(kind='histogram',filename='')
```

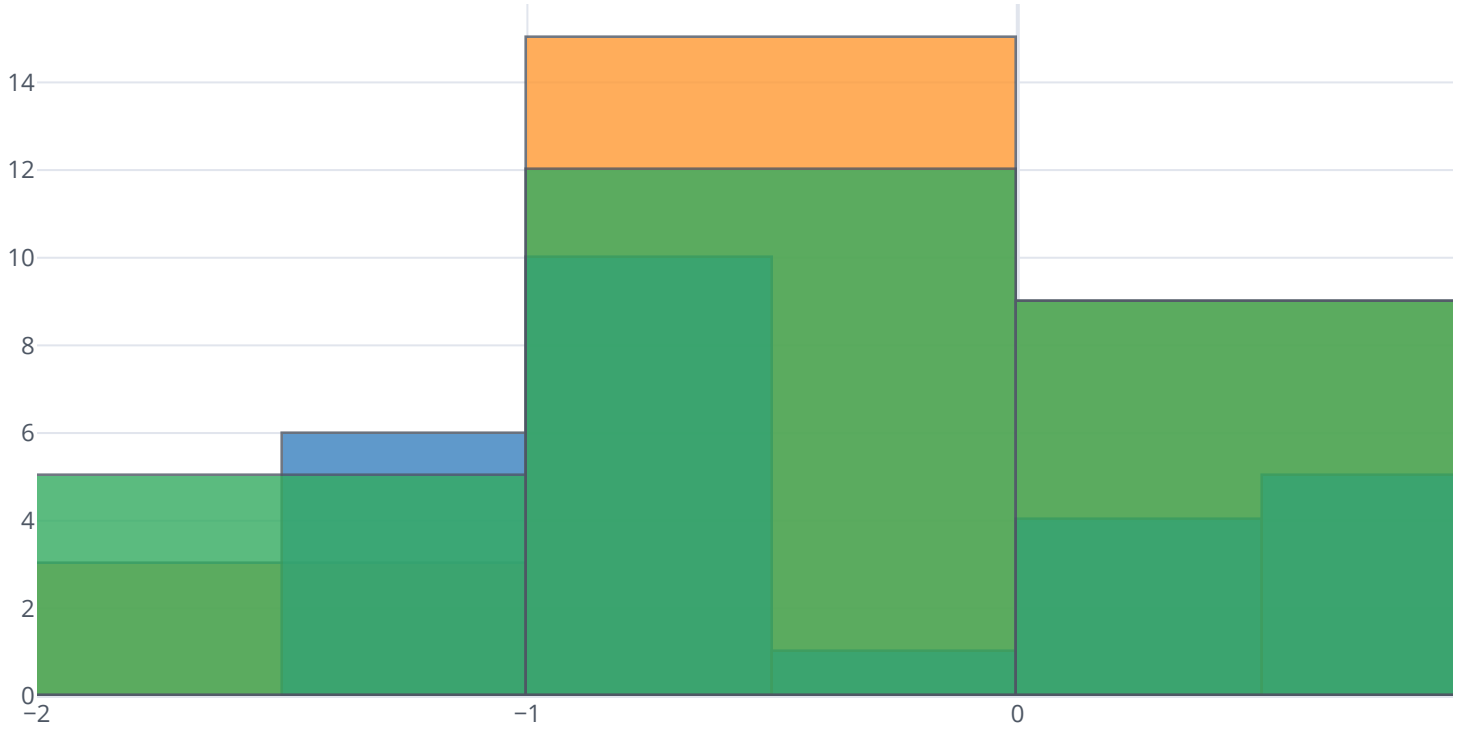
```
C:\Users\Lillian\Anaconda3\lib\site-packages\IPython\core\display.py:694: UserWarning:

Consider using IPython.display.IFrame instead
```



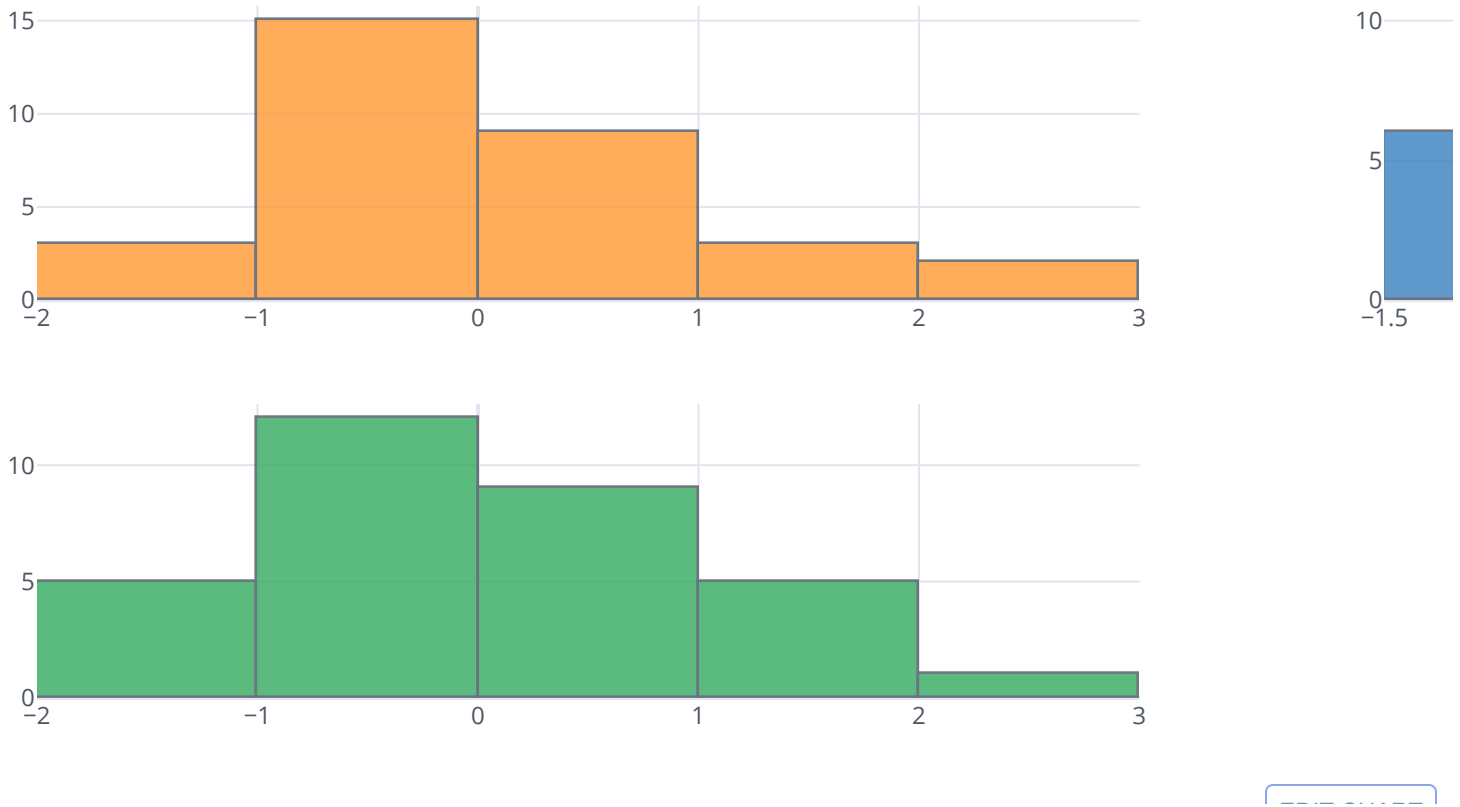

```
cars_subset = cars[['mpg', 'disp', 'hp']]

cars_data_std = StandardScaler().fit_transform(cars_subset)

cars_select = pd.DataFrame(cars_data_std)
cars_select.columns = ['mpg', 'disp', 'hp']

cars_select.iplot(kind='histogram', filename= 'multiple-histogram-chart')
cars_data= StandardScaler().fit_transform(cars_subset)
```

```
cars=pd.DataFrame(cars_data)
cars.columns=['','','']
cars.iplot(kind='histogram',filename='')
```

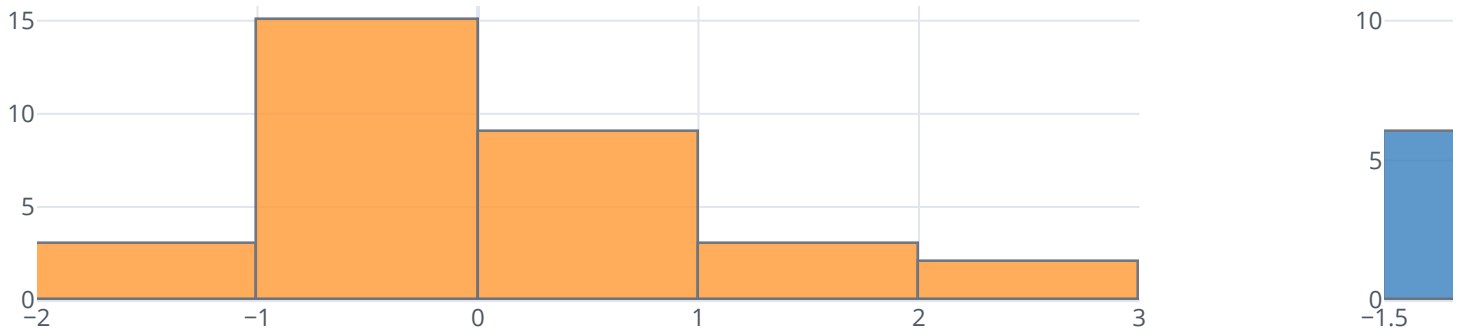
```
C:\Users\Lillian\Anaconda3\lib\site-packages\IPython\core\display.py:694: UserWarning:

Consider using IPython.display.IFrame instead
```




```
cars_select.iplot(kind='histogram', subplots=True, filename= 'subplot-histograms')
cars.iplot(kind='histogram',subpllot=True,filename='')
```



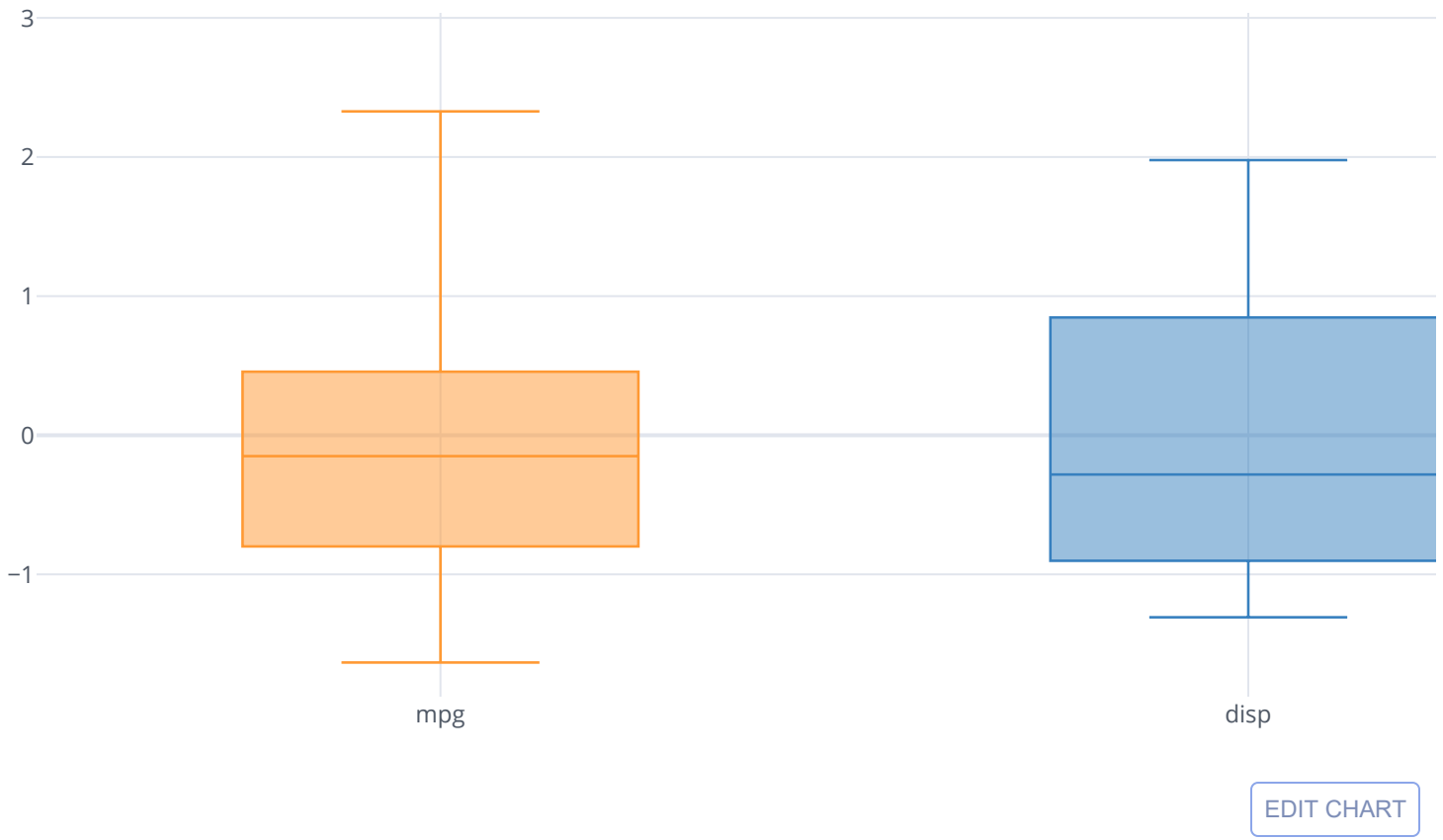

```
cars_select.iplot(kind='histogram', subplots=True, shape=(3,1), filename= 'subplot-histograms')
cars.iplot(kind='histogram', subplots=True, shape=(3,1), filename='')
```




```
cars_select.iplot(kind='histogram', subplots=True, shape=(1,3), filename= 'subplot-histograms')
cars.iplot(kind='hstogram',subplot=True, shape=(1,3), filename='')
```

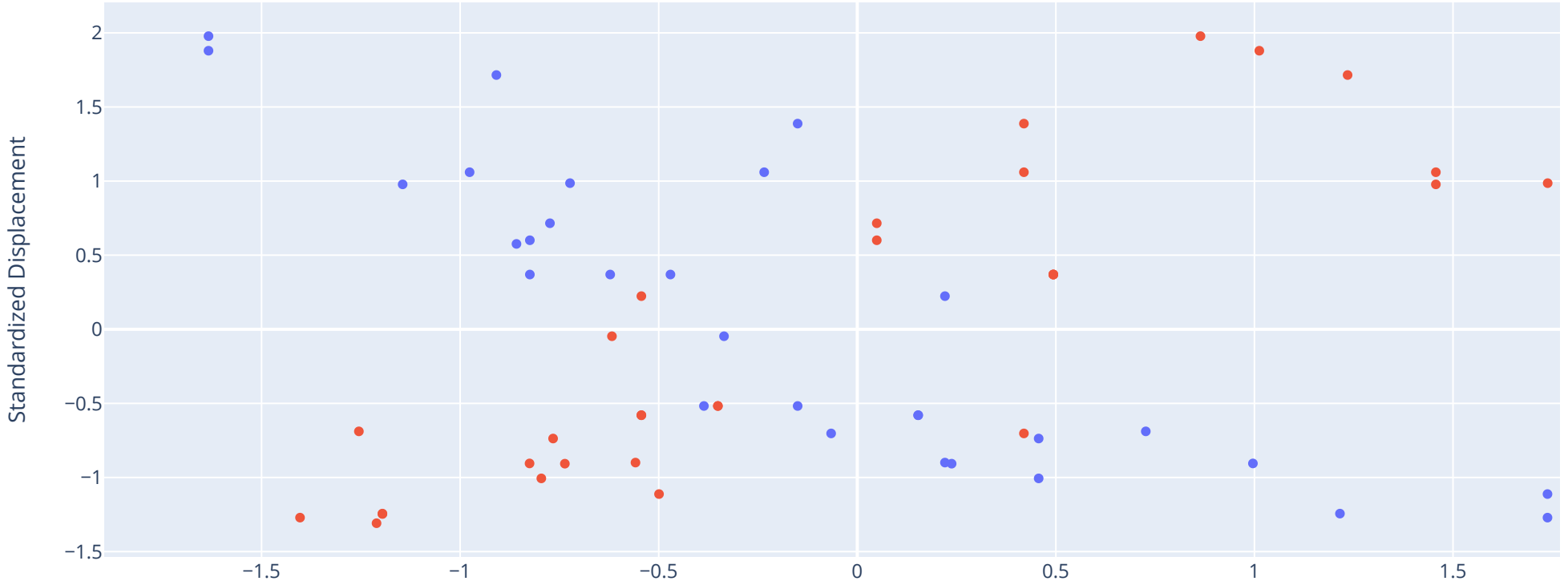
Creating box plots

```
cars_select.iplot(kind='box', filename= 'box-plots')
cars.iplot(kind='box',filename='')
```



Creating scatter plots

```
fig = {'data':[{'x': cars_select.mpg, 'y':cars_select.disp, 'mode':'markers', 'name':'mpg'},
               {'x': cars_select.hp, 'y':cars_select.disp, 'mode':'markers', 'name':'hp'}],
       'layout': {'xaxis':{'title':''}, 'yaxis':{'title':'Standardized Displacement'}}}
py.iplot(fig, filename= 'grouped-scatter-plot')

fig= { 'data': [{ 'x': cars.mpg, 'y': cars.disp, 'mode': 'markers', 'name':'mpg'},
               { 'x': cars.hp, 'y':cars.disp, 'mode':'markers', 'name':'hp'}],
      'layout':{'xaxis:{'title':''},'yaxis':{'title':''}}}
plotly.plotly.iplot(fi)
```



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