



```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import seaborn as sns
%matplotlib inline
```

[1] ✓ 3.6s

```
from plotly import __version__
print(__version__)
```

[2] ✓ 0.7s

... 5.6.0

```
import cufflinks as cf
```

[3] ✓ 1.1s

```
from plotly.offline import download_plotlyjs, init_notebook_mode, plot, iplot
```

[4] ✓ 0.4s



```
init_notebook_mode(connected=True)
```

[5] ✓ 0.3s

...

```
cf.go_offline()
```

[6] ✓ 0.8s

...

```
#DATA
```

```
df = pd.DataFrame(np.random.randn(100,4), columns='A B C D'.split())
```

[7] ✓ 0.8s

```
df.head()
```

[8] ✓ 0.1s

...

	A	B	C	D
0	-1.611371	0.197909	0.706149	0.065155
1	0.946478	-0.948953	-0.041923	1.850320
2	-1.541073	-1.263148	0.864751	-0.770196
3	-0.311397	-0.512164	0.345728	0.906810



```
df2 = pd.DataFrame({'Category':['A','B','C'], 'Values':[32,43,50]})
```

[9]

✓ 0.5s

df2

[10]

✓ 0.9s

...

	Category	Values
--	----------	--------

0	A	32
---	---	----

1	B	43
---	---	----

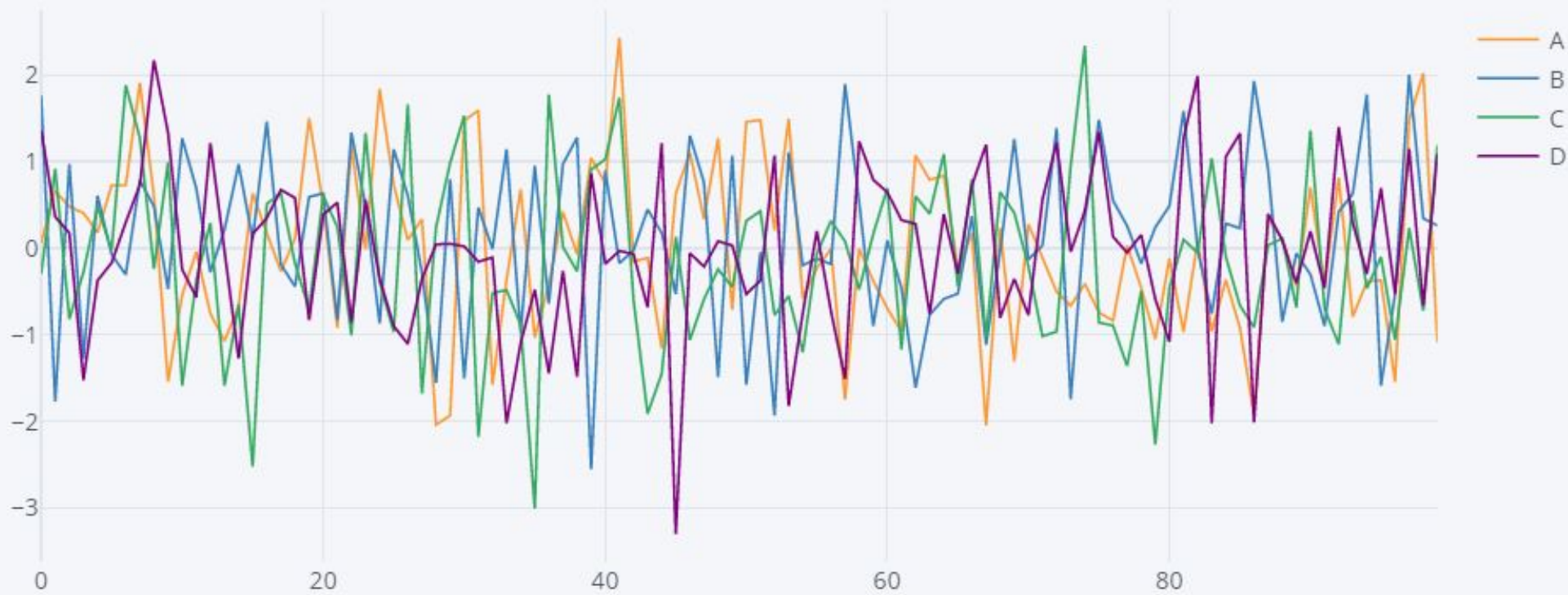
2	C	50
---	---	----

```
df.iplot()
```

[12]

✓ 1.1s

...



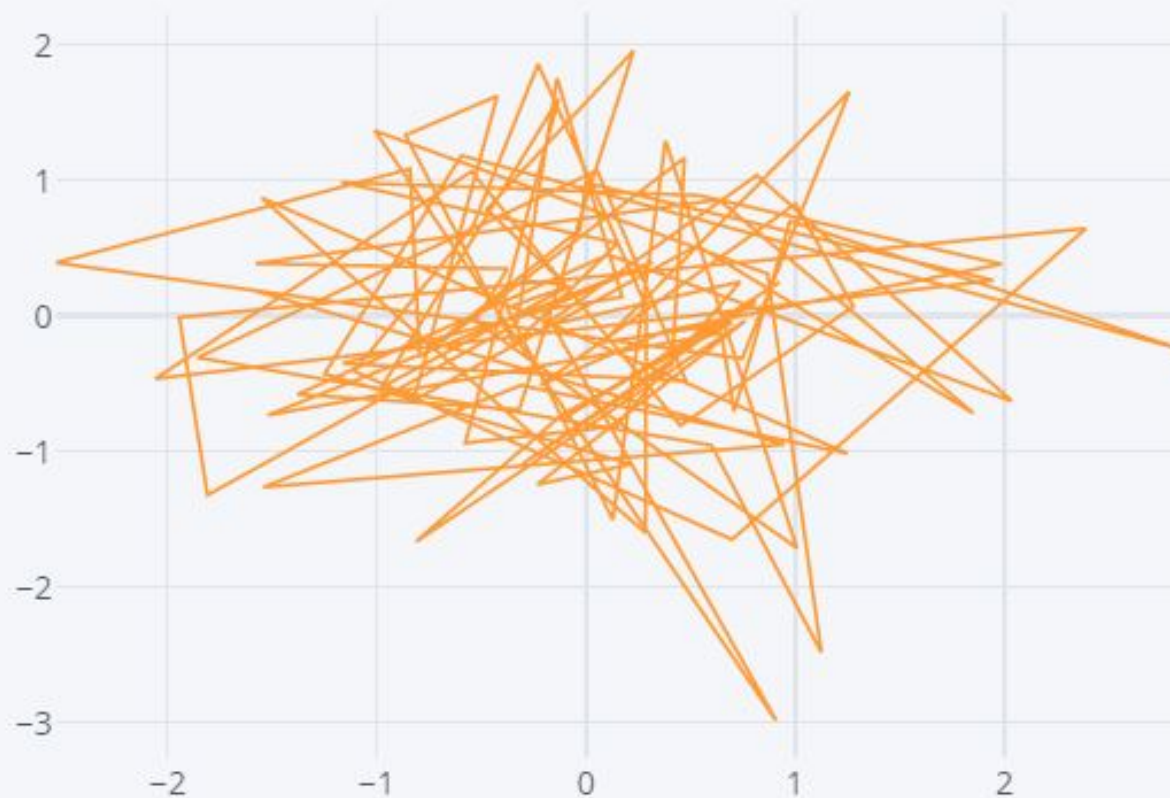


```
df.ipplot(kind='scatter', x='A', y='B')
```

[13]

✓ 0.1s

...

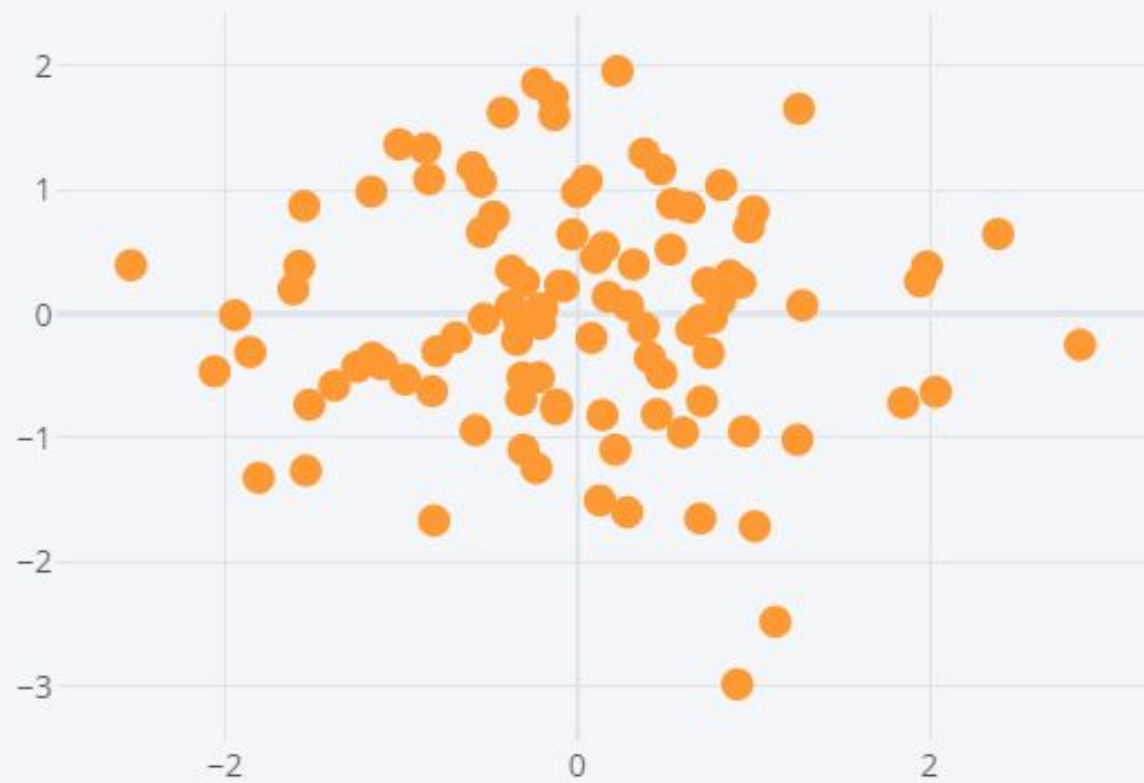



```
df.iplot(kind='scatter', x='A', y='B', mode='markers')
```

[14]

✓ 0.2s

...





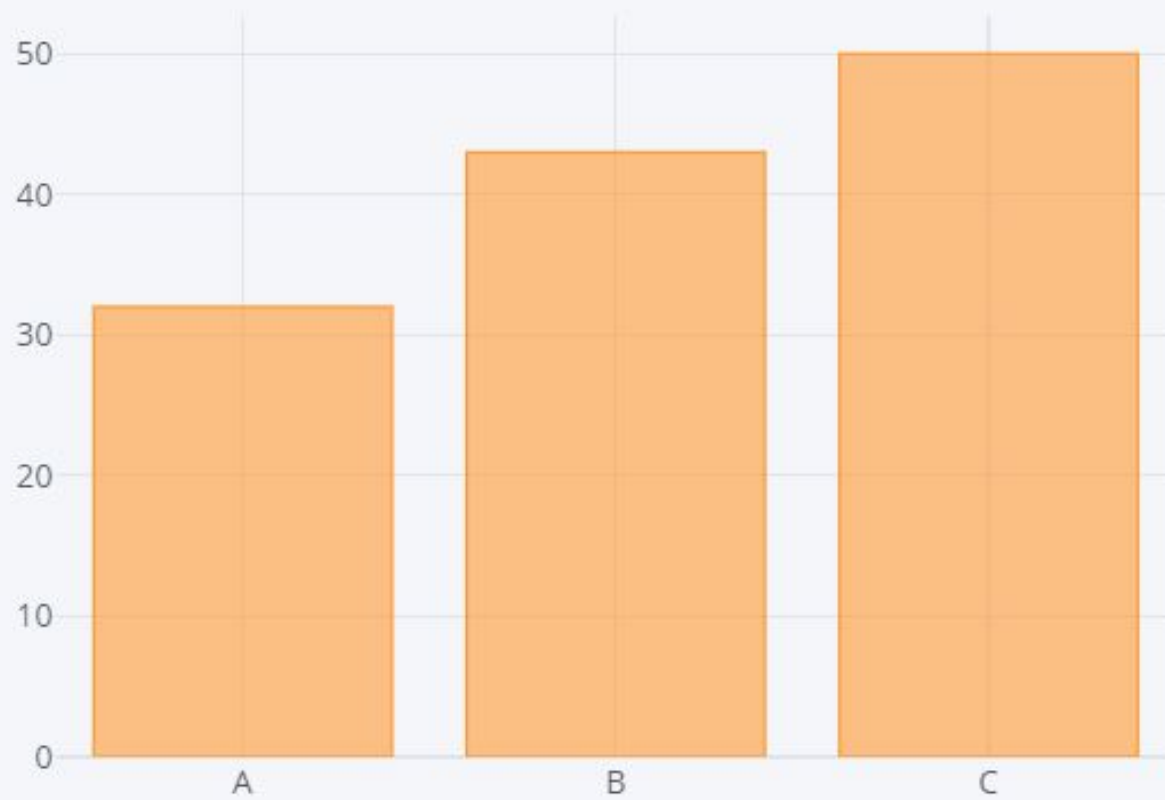
```
df2.ipplot(kind='bar', x='Category', y='Values')
```

[22]



0.1s

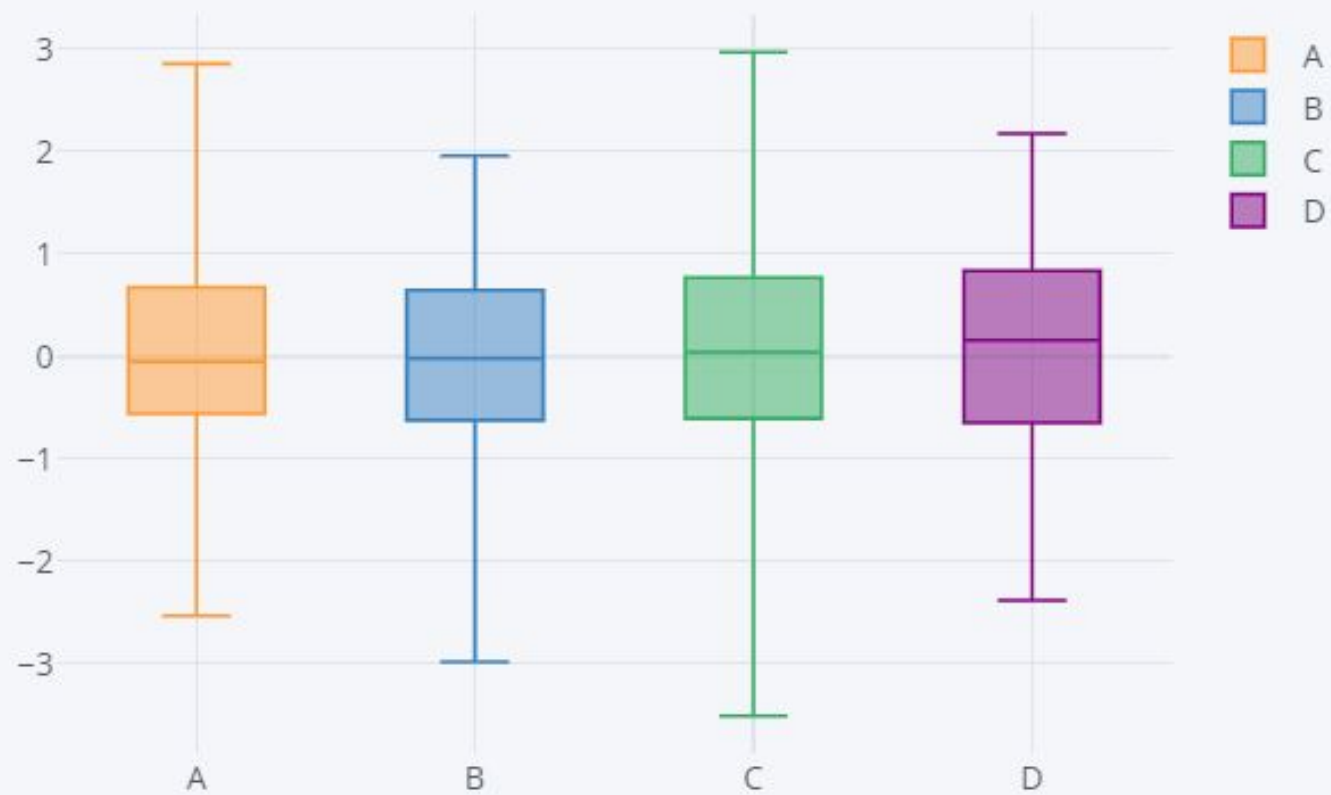
...




```
df.iplot(kind='box')
```

[23]

✓ 0.1s





```
df3 = pd.DataFrame({'x':[1,2,3,4,5], 'y':[10,20,30,40,50], 'z':[500,400,300,200,100]})
```

[24]

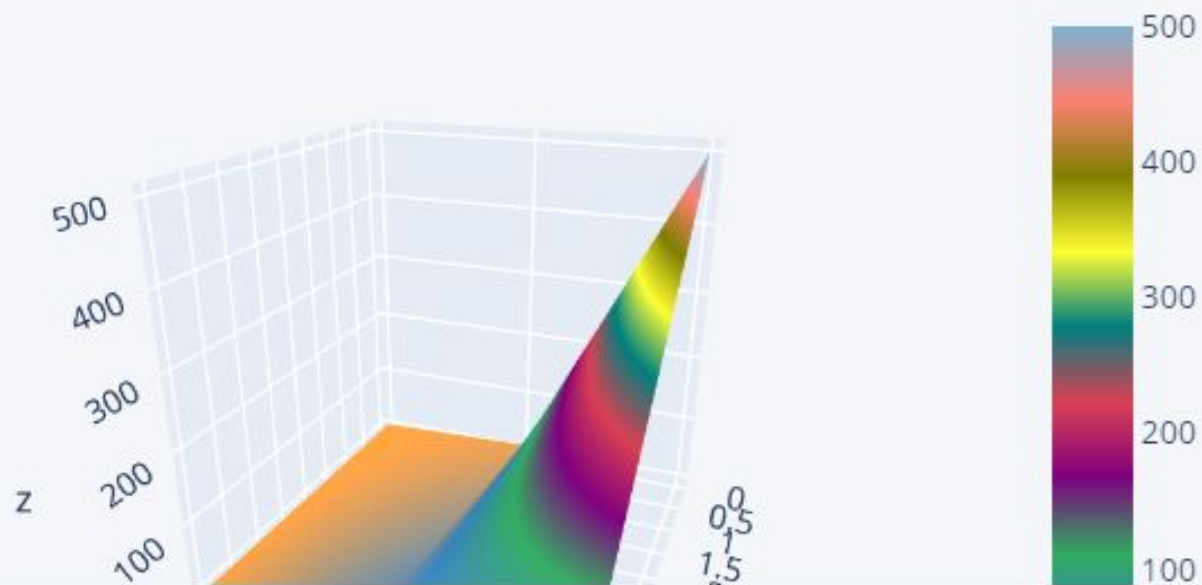
✓ 0.7s

```
df3.iplot(kind='surface')
```

[26]

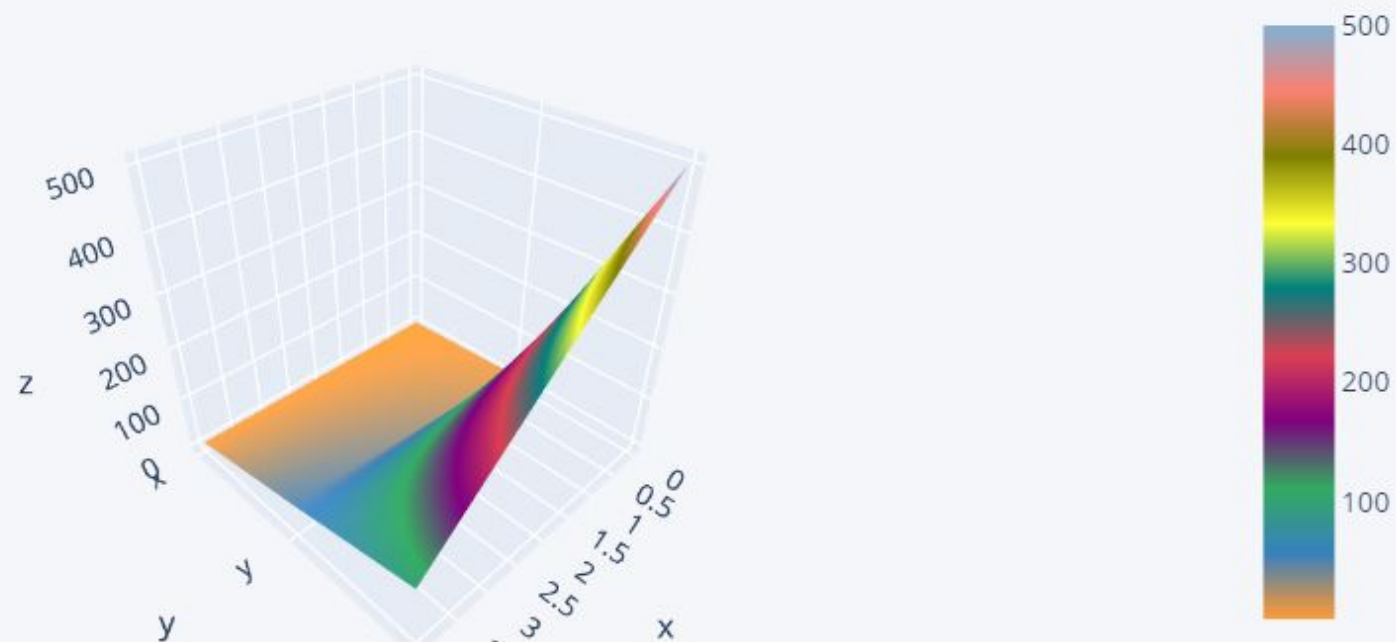
✓ 0.3s

...



[56]

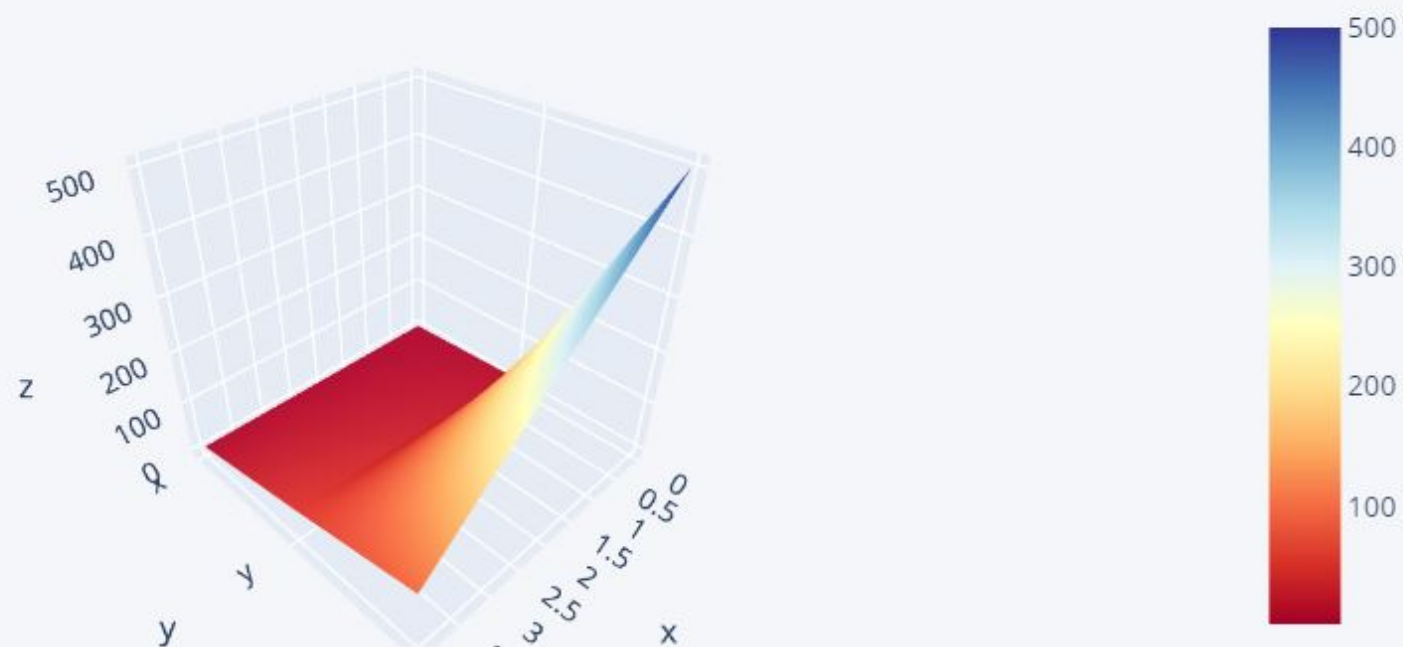
...



```
df3.iplot(kind='surface', colorscale='rdylbu')
```

[57]

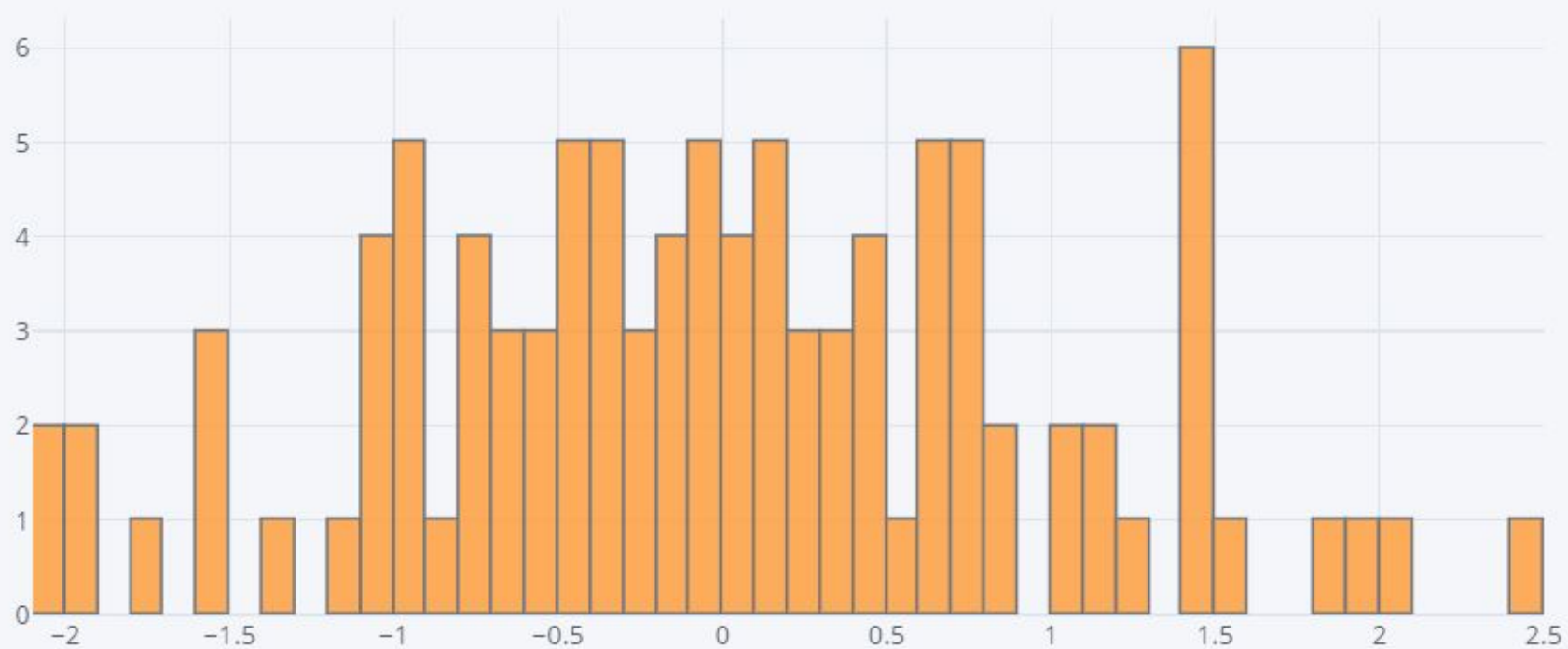
...



```
df['A'].plot(kind='hist', bins=50)
```

[58]

...



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

[59]

...





```
df[['A','B']].iplot(kind='spread')
```

[60]

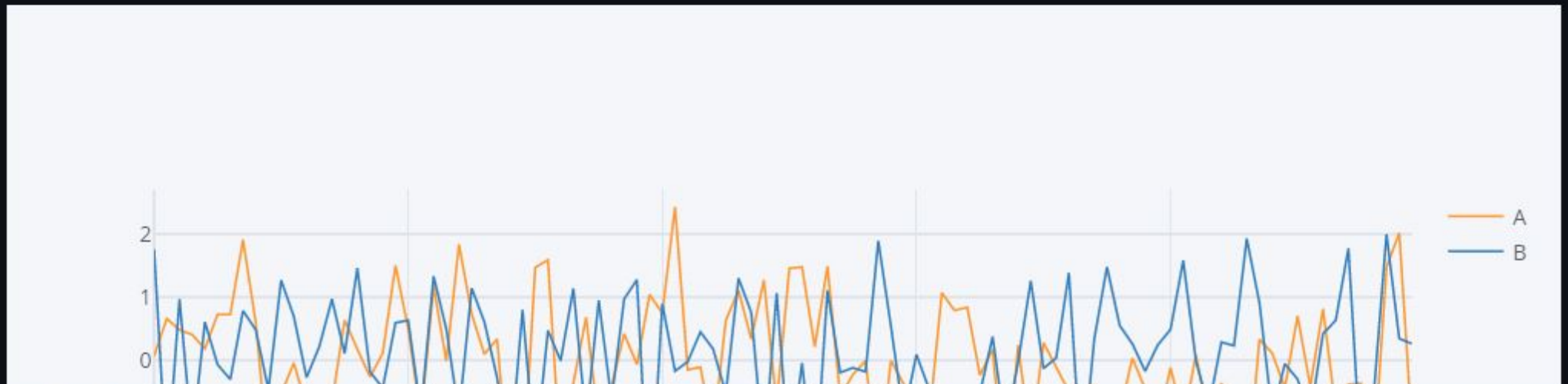


C:\Users\hp\AppData\Roaming\Python\Python310\site-packages\cufflinks\plotlytools.py:849: FutureWarning:

The pandas.np module is deprecated and will be removed from pandas in a future version. Import numpy directly in

C:\Users\hp\AppData\Roaming\Python\Python310\site-packages\cufflinks\plotlytools.py:850: FutureWarning:

The pandas.np module is deprecated and will be removed from pandas in a future version. Import numpy directly in



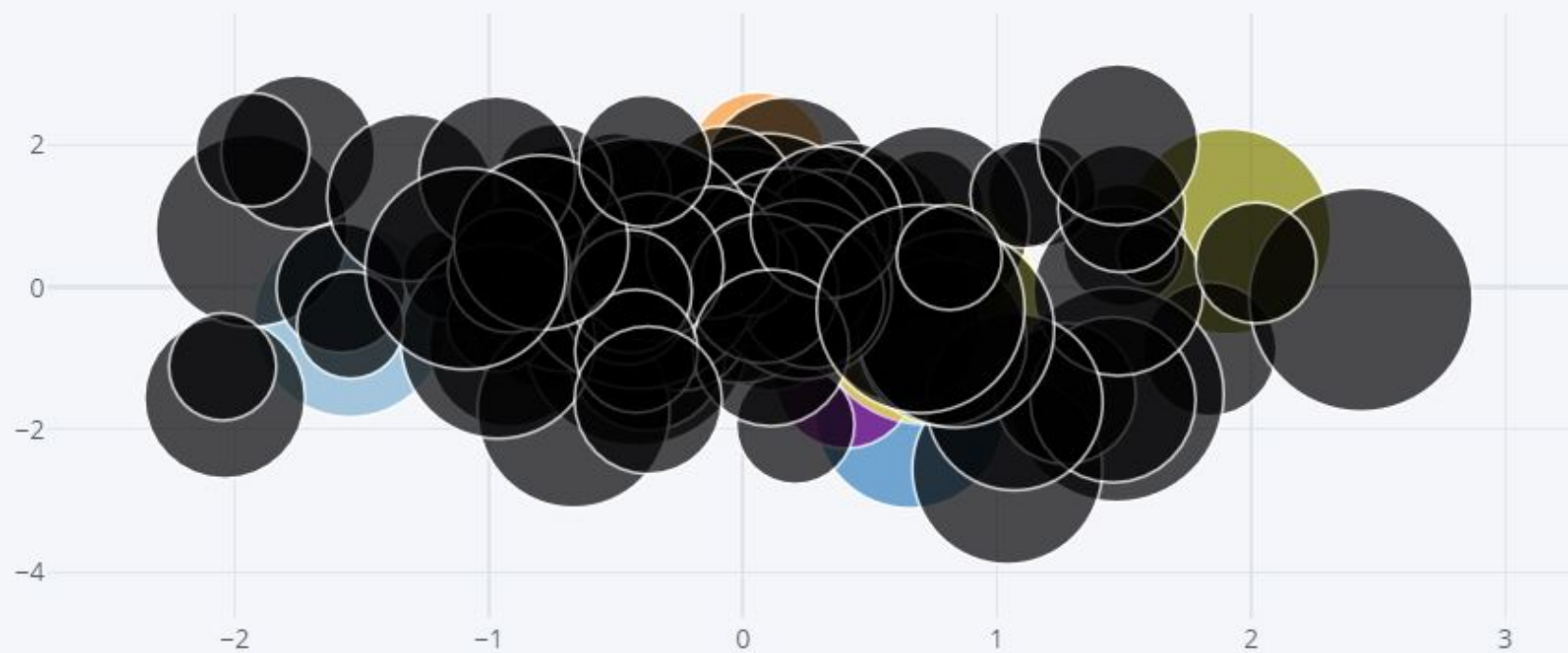




```
df.iplot(kind='bubble', x='A', y='B', size='C')
```

[61]

...



```
df.scatter_matrix()
```

[62]

...

