

Plotly and Cufflinks

Plotly is a library that allows us to create interactive plots that we can use in dashboards or websites.

```
In [1]: import pandas as pd
import numpy as np
%matplotlib inline
```

```
In [2]: from plotly import __version__
from plotly.offline import download_plotlyjs, init_notebook_mode, plot, iplot

print(__version__) # requires version >= 1.9.0

3.5.0
```

```
In [3]: import cufflinks as cf
```

```
In [4]: # For Notebooks
init_notebook_mode(connected=True)
```

```
In [5]: # For offline use
cf.go_offline()
```

```
In [6]: df = pd.DataFrame(np.random.randn(100,4),columns='A B C D'.split())
```

```
In [7]: df.head()
```

```
Out[7]:
```

	A	B	C	D
0	1.081079	-0.561631	0.525402	0.187314
1	-0.681461	0.847922	2.280252	-1.310376
2	-0.532377	-0.469187	-0.431209	1.898656
3	-1.148561	0.553636	-0.919976	0.788411
4	-0.187440	-1.978549	0.243079	-1.576169

```
In [8]: df2 = pd.DataFrame({'Category': ['A', 'B', 'C'], 'Values': [32, 43, 50]})
```

```
In [9]: df2.head()
```

```
Out[9]:
```

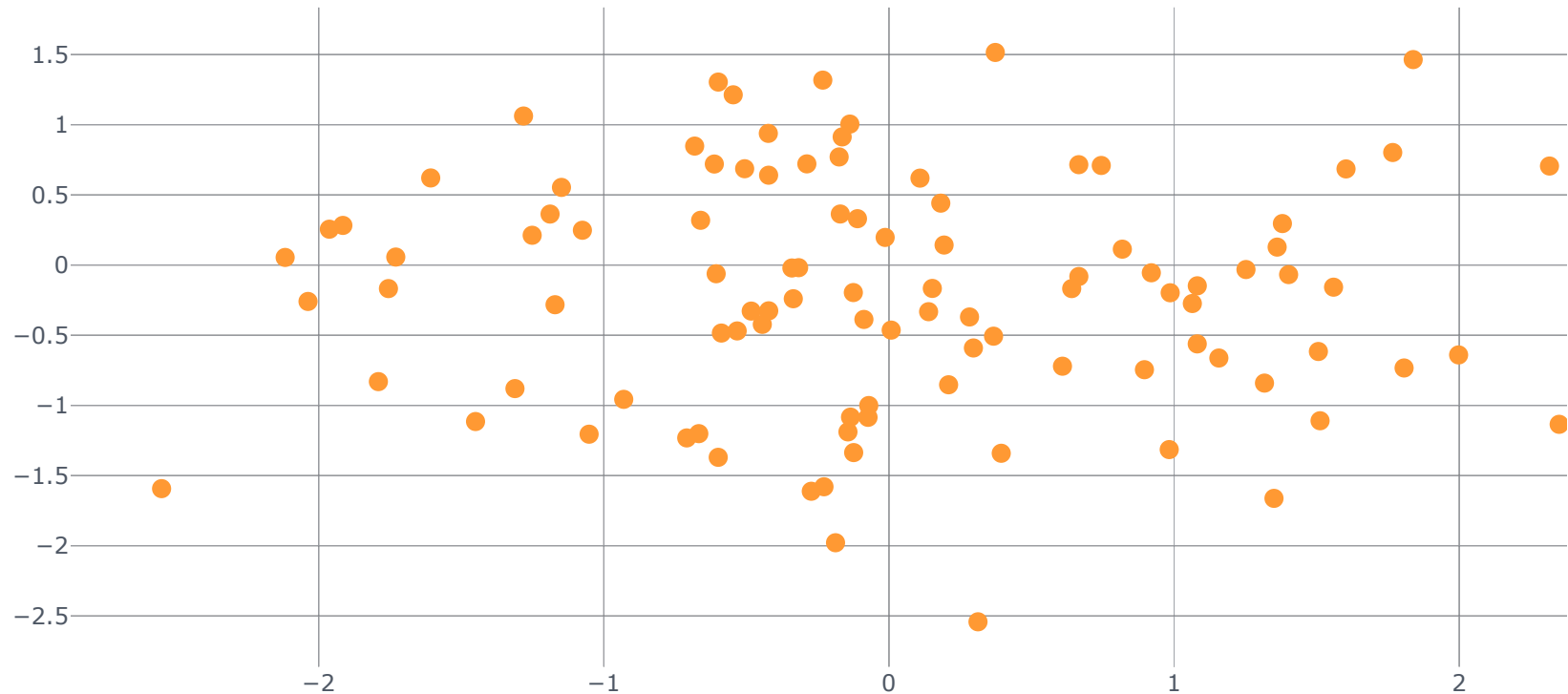
	Category	Values
0	A	32
1	B	43
2	C	50

Using Cufflinks and iplot()

- scatter
- bar
- box
- spread
- ratio
- heatmap
- surface
- histogram
- bubble

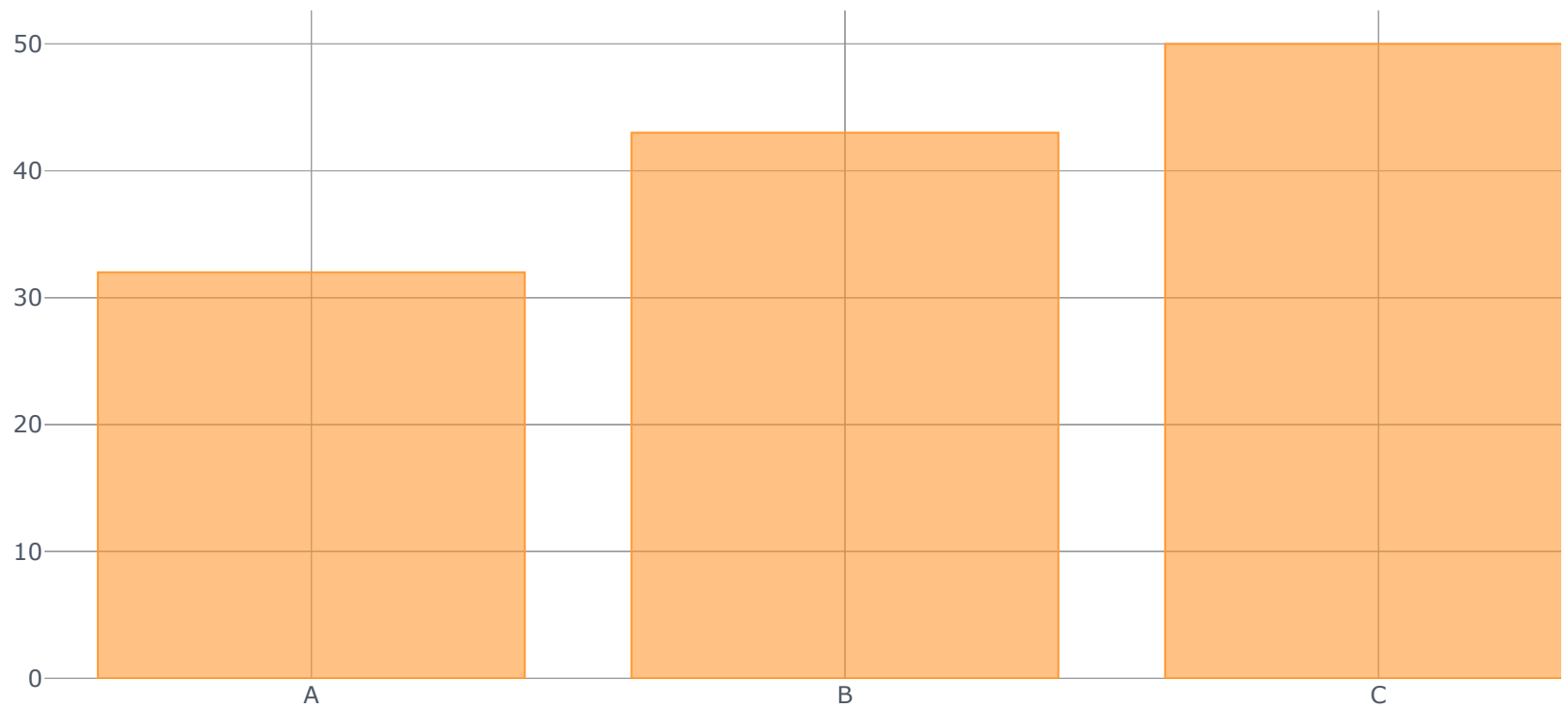
Scatter

```
In [10]: df.iplot(kind='scatter',x='A',y='B',mode='markers',size=10)
```

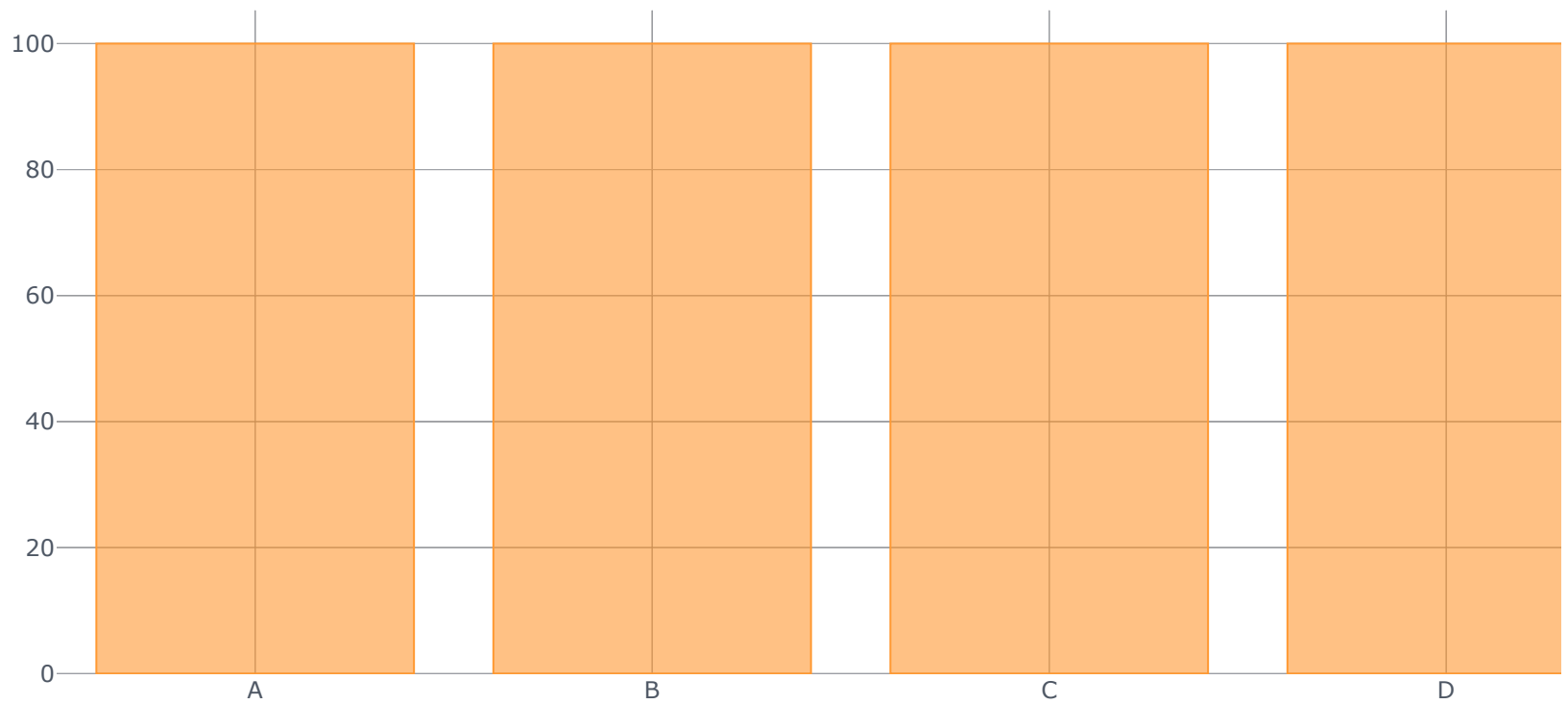


Bar Plots

```
In [11]: df2.iplot(kind='bar',x='Category',y='Values')
```

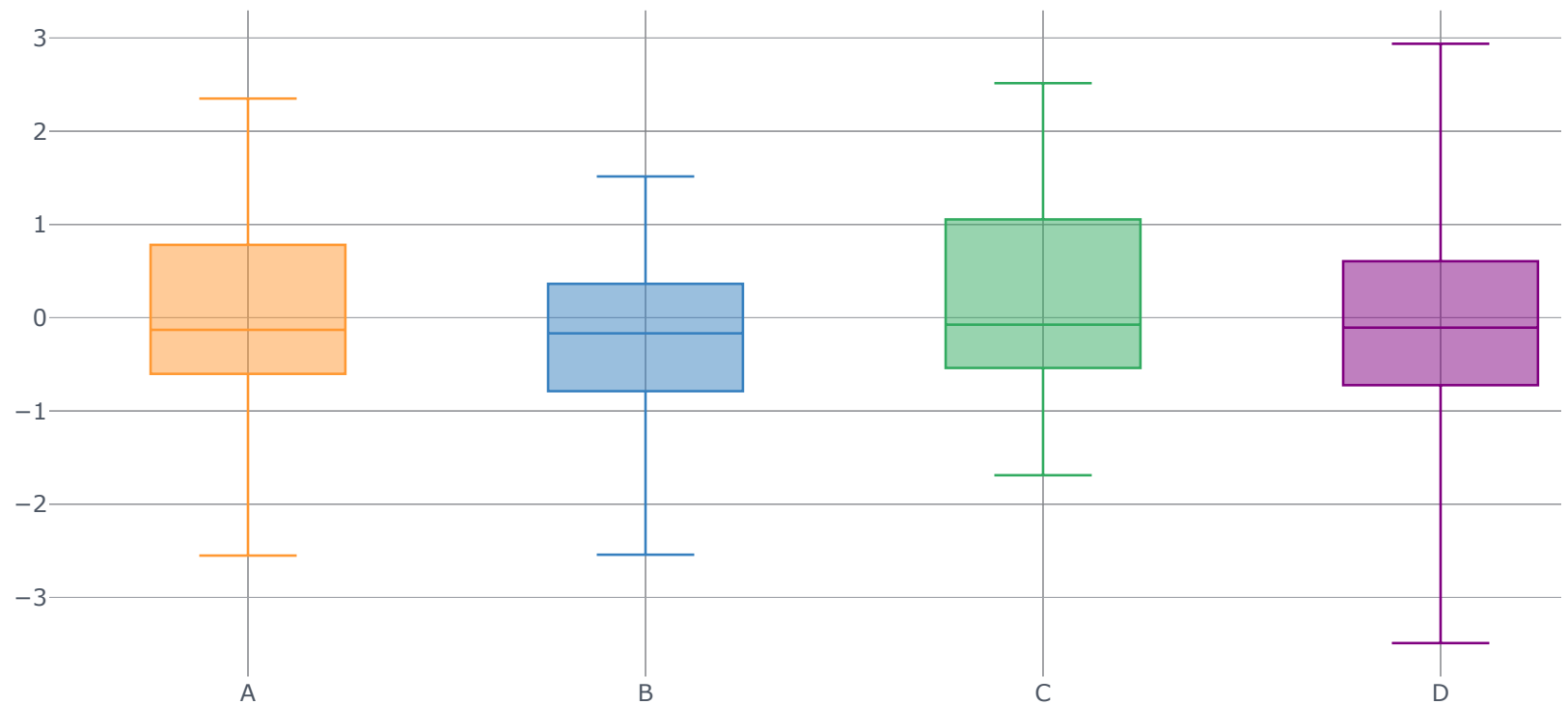


```
In [12]: df.count().iplot(kind='bar')
```



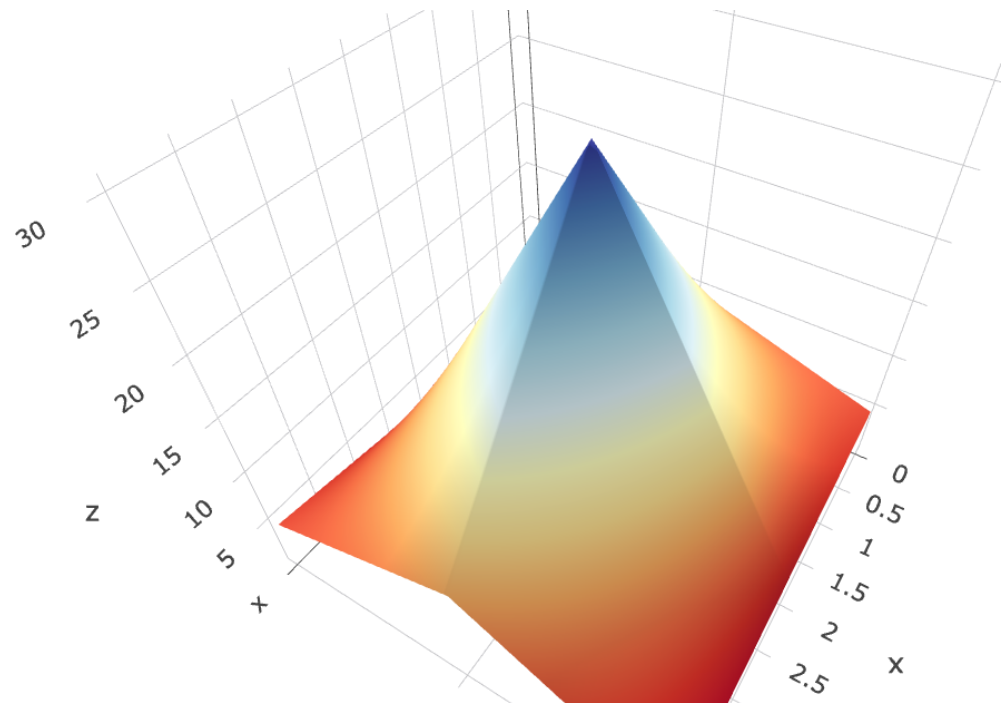
Boxplots

```
In [13]: df.iplot(kind='box')
```



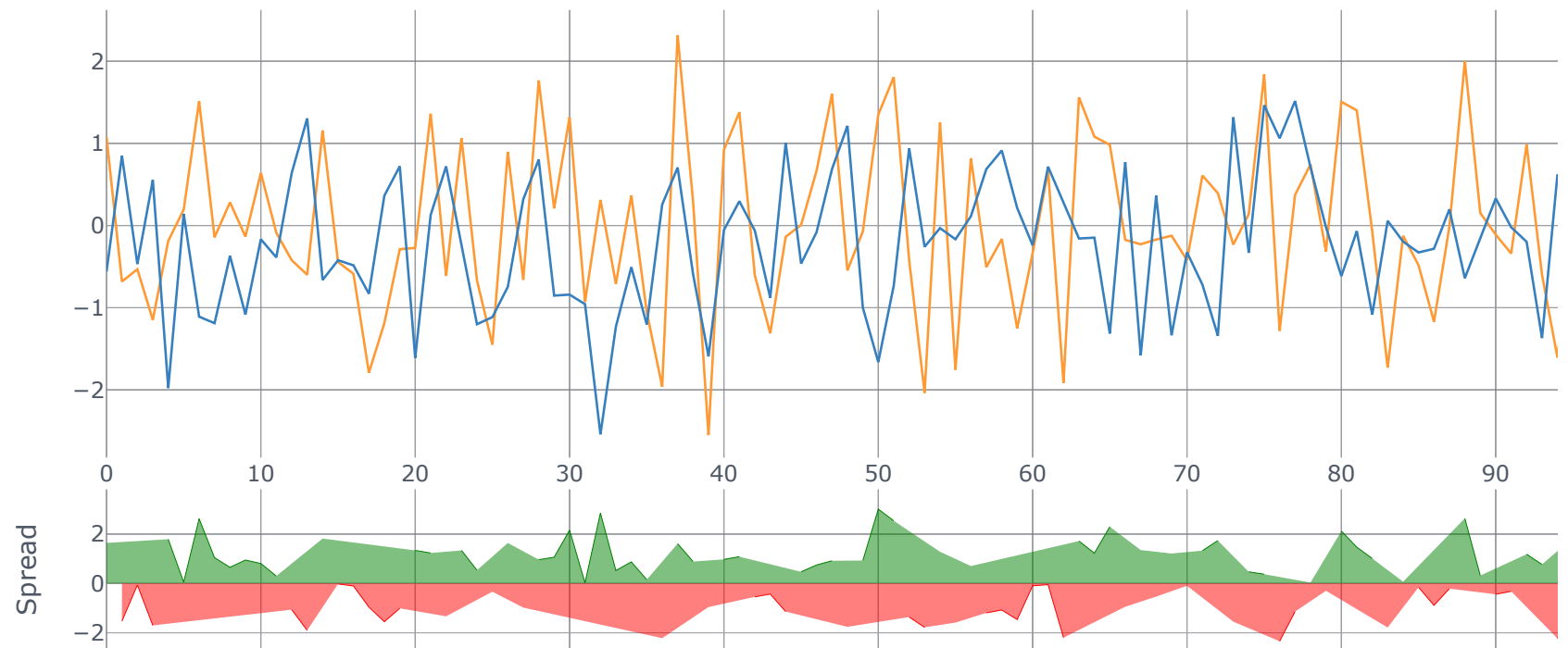
3d Surface

```
In [14]: df3 = pd.DataFrame({'x':[1,2,3,4,5], 'y':[10,20,30,20,10], 'z':[5,4,3,2,1]})  
df3.iplot(kind='surface', colorscale='rdylbu')
```



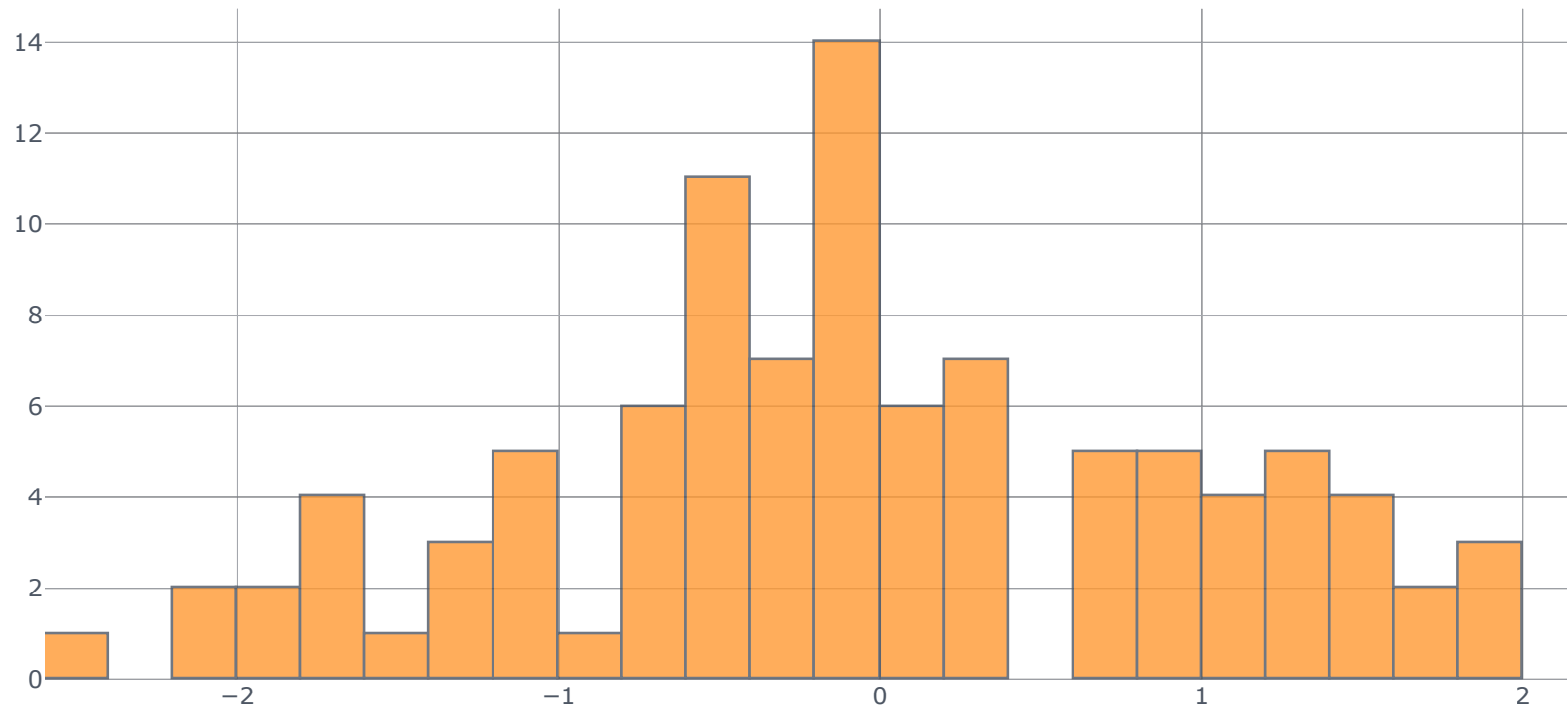
Spread

```
In [15]: df[['A', 'B']].iplot(kind='spread')
```

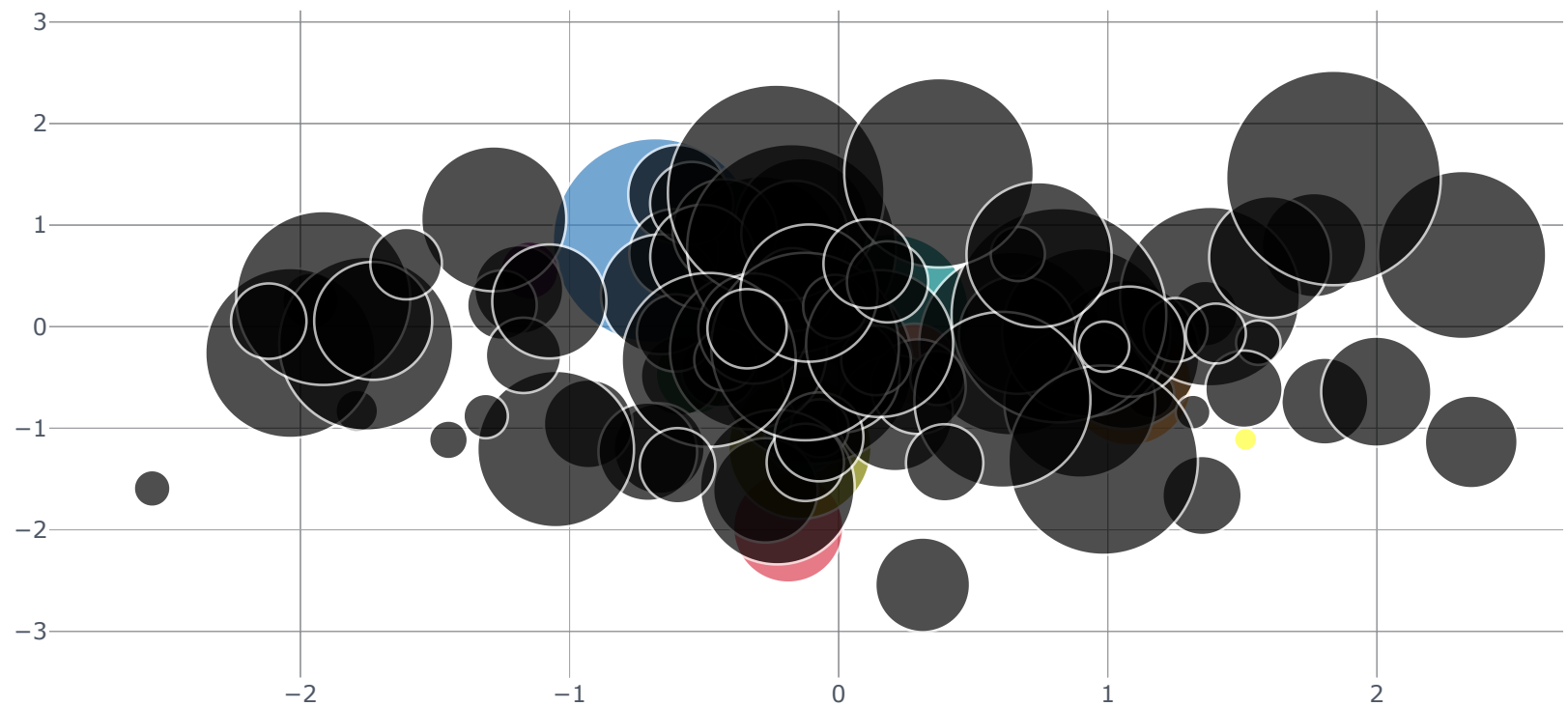


histogram


```
In [16]: df['A'].iplot(kind='hist',bins=25)
```



```
In [17]: df.iplot(kind='bubble',x='A',y='B',size='C')
```



scatter_matrix()

Similar to sns.pairplot()

```
In [18]: df.scatter_matrix()
```

