 plotly

Plotly for Pandas is now entirely open source, free, and self-hosted
Learn more about why we've open sourced

⛑ HELP   /   API LIBRARIES   /   PANDAS   /   TIME SERIES

Time Series in Pandas

MATPLOTLIB

R

PYTHON

{ } PLOTLY.JS

MATLAB

PANDAS

BASIC TIME SERIES

```
# Learn about API authentication here: https://plot.ly/pandas/getting-started
# Find your api_key here: https://plot.ly/settings/api

import plotly.plotly as py
import plotly.graph_objs as go
import pandas as pd
```
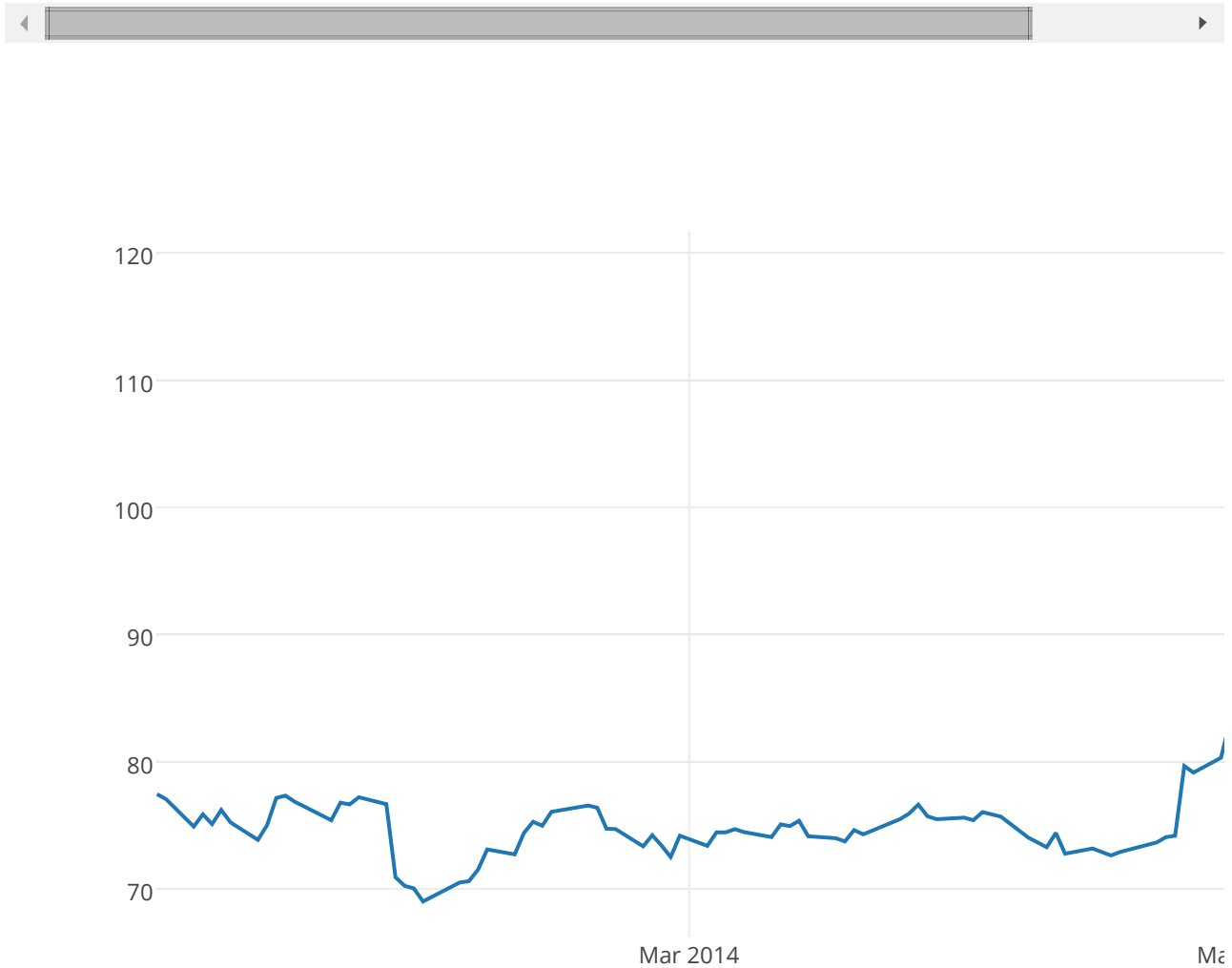
```
df = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/2014_orange_
df.head()

trace = go.Scatter( x=df['AAPL_x'], y=df['AAPL_y'] )
data = [trace]

# IPython notebook
# py.iplot(data, filename='pandas-time-series')

url = py.plot(data, filename='pandas-time-series')
```


TIME SERIES WITH ERROR BARS

```
# Learn about API authentication here: https://plot.ly/pandas/getting-started
# Find your api_key here: https://plot.ly/settings/api

import plotly.plotly as py
import plotly.graph_objs as go
import pandas as pd

df = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/wind_speed_l
df.head()

upper_bound = go.Scatter(
    name='Upper Bound',
    x=df['Time'],
```

```
        y=df['10 Min Sampled Avg']+df['10 Min Std Dev'],
        mode='lines',
        marker=dict(color="444"),
        line=dict(width=0),
        fillcolor='rgba(68, 68, 68, 0.3)',
        fill='tonexty' )

trace = go.Scatter(
        name='Measurement',
        x=df['Time'],
        y=df['10 Min Sampled Avg'],
        mode='lines',
        line=dict(color='rgb(31, 119, 180)'),
        fillcolor='rgba(68, 68, 68, 0.3)',
        fill='tonexty' )

lower_bound = go.Scatter(
        name='Lower Bound',
        x=df['Time'],
        y=df['10 Min Sampled Avg']-df['10 Min Std Dev'],
        marker=dict(color="444"),
        line=dict(width=0),
        mode='lines' )

# Trace order can be important
# with continuous error bars
data = [lower_bound, trace, upper_bound]

layout = go.Layout(
        yaxis=dict(title='Wind speed (m/s)'),
        title='Continuous, variable value error bars
Notice the hover text!',
        showlegend = False)
fig = go.Figure(data=data, layout=layout)

# IPython notebook
# py.iplot(fig, filename='pandas-time-series-error-bars')

url = py.plot(fig, filename='pandas-time-series-error-bars')
```
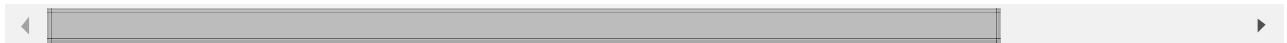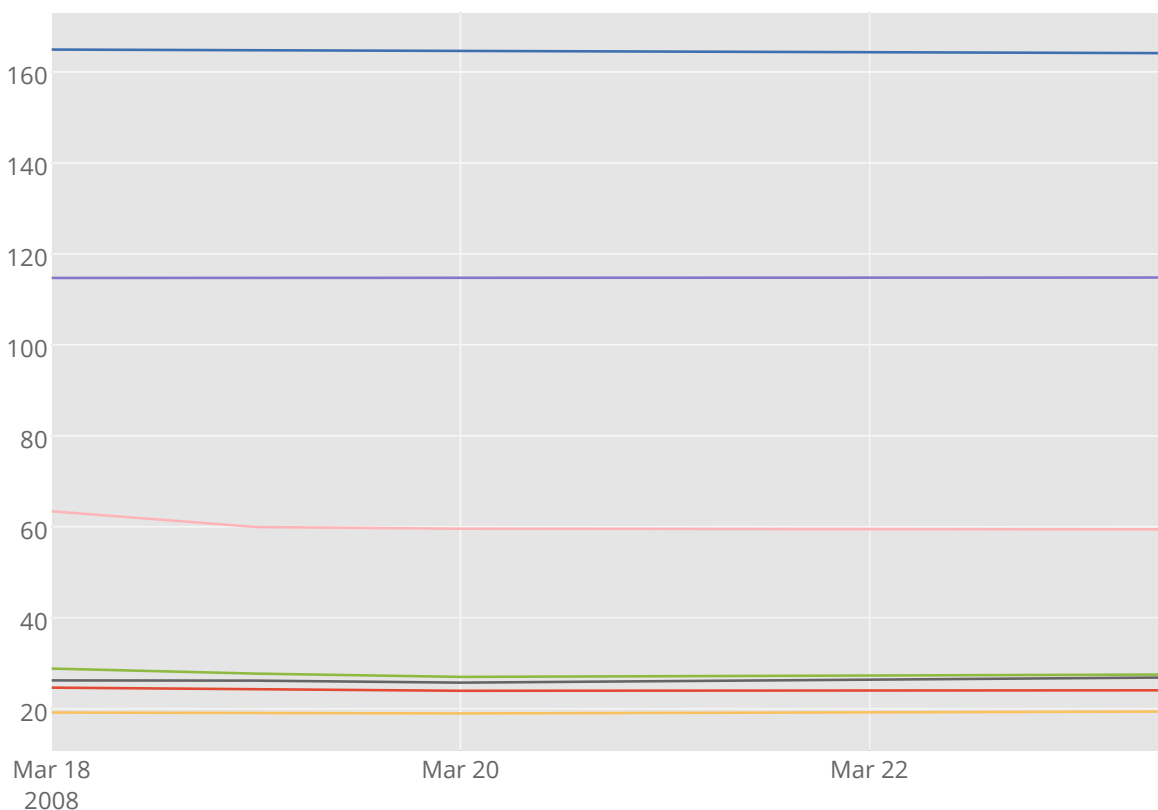
TIME SERIES OF PANDAS DATEFRAME

```
# Learn about API authentication here: https://plot.ly/pandas/getting-started
# Find your api_key here: https://plot.ly/settings/api
# Cufflinks binds plotly to pandas dataframes in IPython notebook. Read more

import plotly.plotly as py
import cufflinks as cf
import pandas as pd

df = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/timeseries.c
df.head()

cf.set_config_file(offline=False, world_readable=True, theme='ggplot')

df.iplot(x='Date',kind='scatter')
```
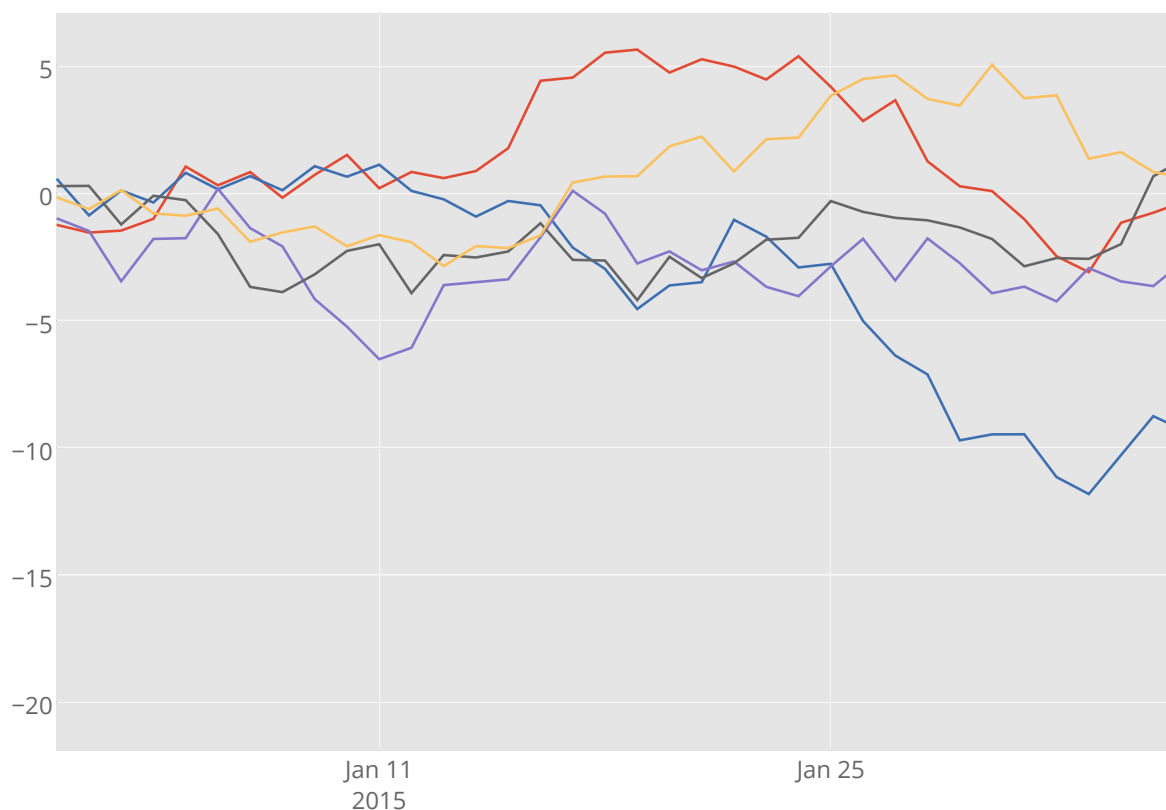
PANDAS DATAFRAME INDEX AS DATE

```python
# Learn about API authentication here: https://plot.ly/pandas/getting-started
# Find your api_key here: https://plot.ly/settings/api
# Cufflinks binds plotly to pandas dataframes in IPython notebook. Read more

import plotly.plotly as py
import cufflinks as cf
import pandas as pd

cf.set_config_file(offline=False, world_readable=True, theme='ggplot')

df = cf.datagen.lines()
df.head()
df.iplot(kind='scatter', filename='cufflinks/index-as-date')
```
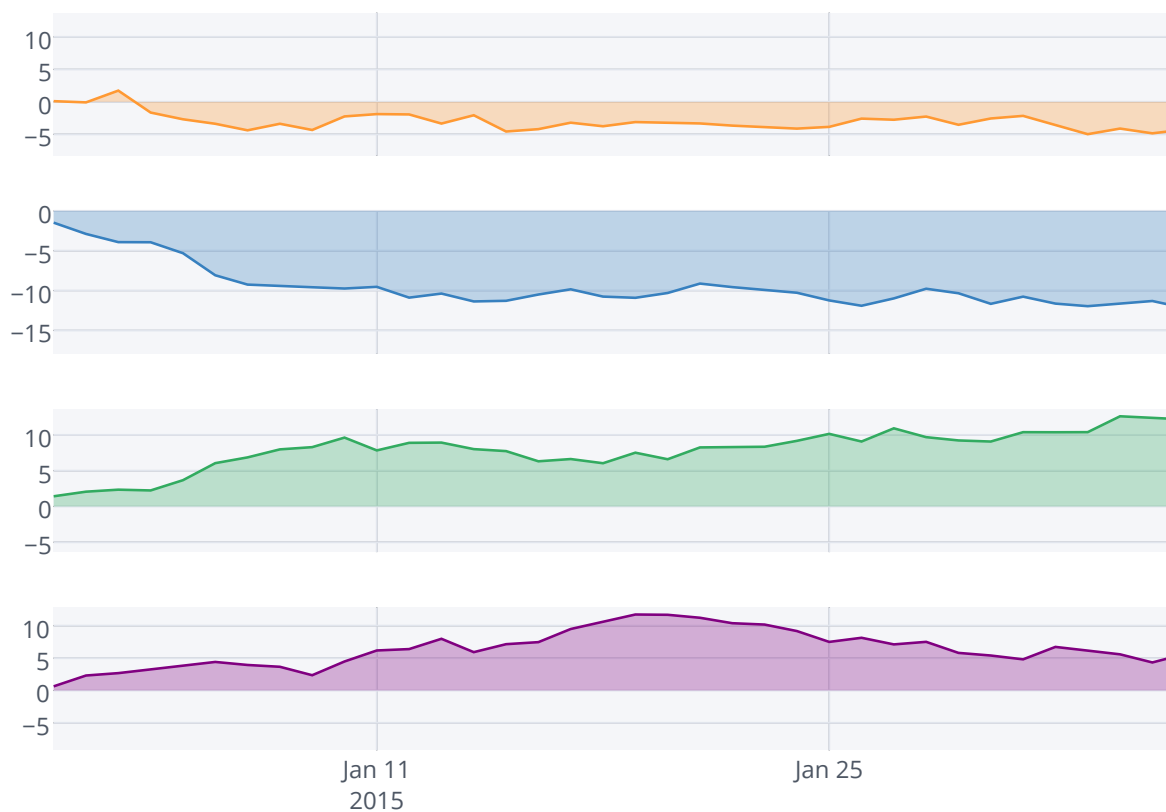
PANDAS TIME SERIES SUBPLOTS

```python
# Learn about API authentication here: https://plot.ly/pandas/getting-started
# Find your api_key here: https://plot.ly/settings/api
# Cufflinks binds plotly to pandas dataframes in IPython notebook. Read more

import plotly.plotly as py
import cufflinks as cf
import pandas as pd

cf.set_config_file(offline=False, world_readable=True, theme='pearl')

df=cf.datagen.lines(4)
df.iplot(subplots=True, shape=(4,1), shared_xaxes=True, fill=True, filename='cufflinks/
```

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