plotly

Show Sidebar Fork on Github

Parallel Coordinates Plot in Python

How to make parallel coorindates plots in Python with Plotly.

R plotly.js Python Pandas

New to Plotly?

Plotly's Python library is free and open source! Get started by downloading the client and reading the primer.
You can set up Plotly to work in online or offline mode, or in jupyter notebooks.
We also have a quick-reference cheatsheet (new!) to help you get started!

Version Check

Note: Parallel Coordinates Plots are available in version 2.0.6+
Run `pip install plotly --upgrade` to update your Plotly version

In [1]:
```
import plotly
plotly.__version__
```

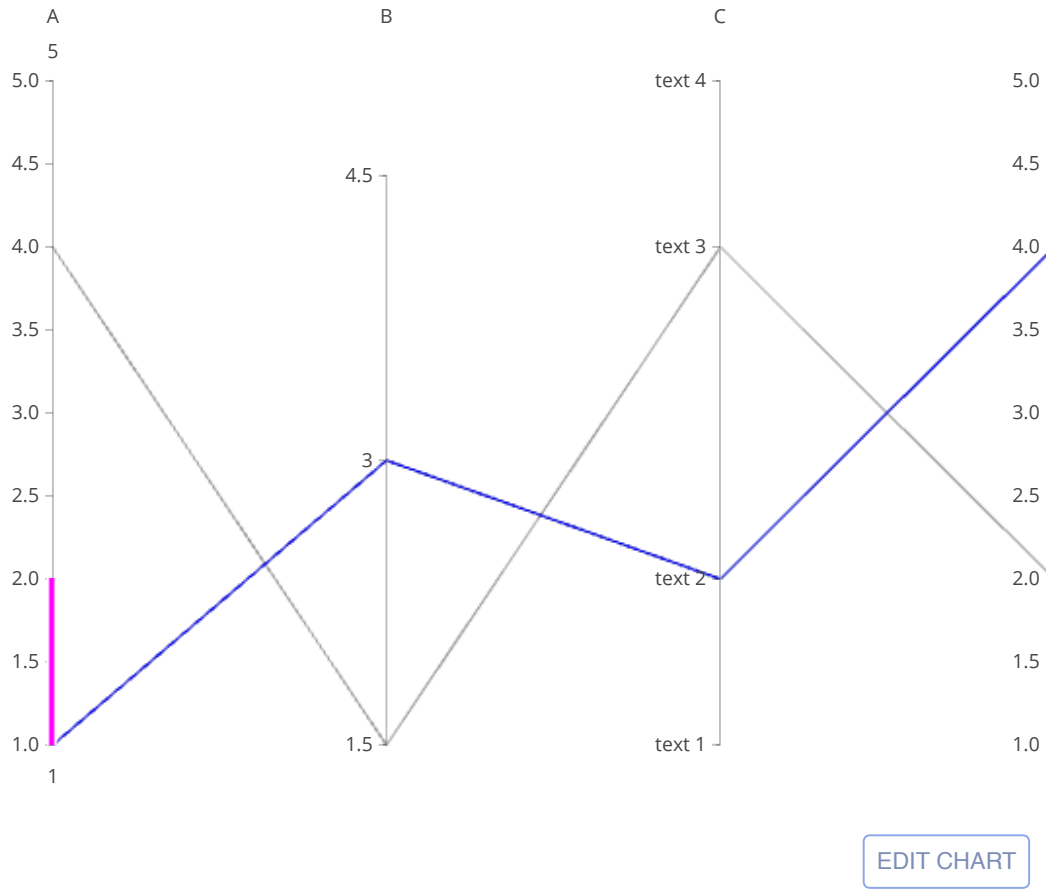
Out[1]:
```
'2.2.1'
```

Adding Dimensions

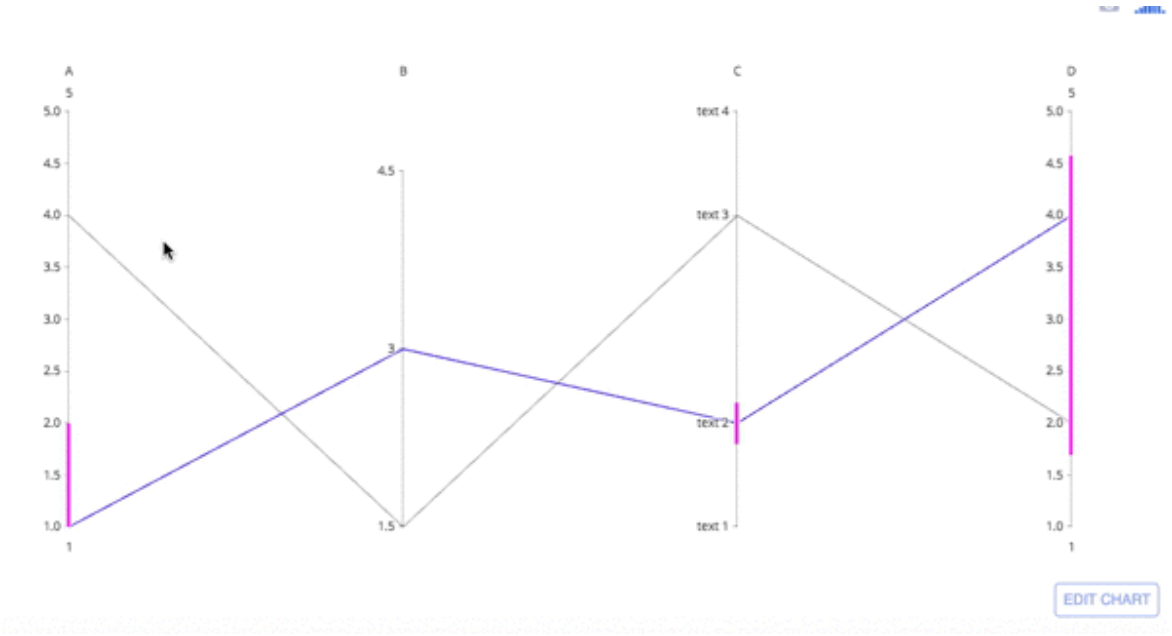
In [2]:

```
import plotly.plotly as py
import plotly.graph_objs as go

data = [
    go.Parcoords(
        line = dict(color = 'blue'),
        dimensions = list([
            dict(range = [1,5],
                 constraintrange = [1,2],
                 label = 'A', values = [1,4]),
            dict(range = [1.5,5],
                 tickvals = [1.5,3,4.5],
                 label = 'B', values = [3,1.5]),
            dict(range = [1,5],
                 tickvals = [1,2,4,5],
                 label = 'C', values = [2,4],
                 ticktext = ['text 1', 'text 2', 'text 3', 'text
 4']),
            dict(range = [1,5],
                 label = 'D', values = [4,2])
        ])
    )
]

py.iplot(data, filename = 'parcoord-dimensions')
```

Out[2]:



Parallel coordinates are richly interactive by default. Drag the lines along the axes to filter regions and drag the axis names across the plot to rearrange variables.

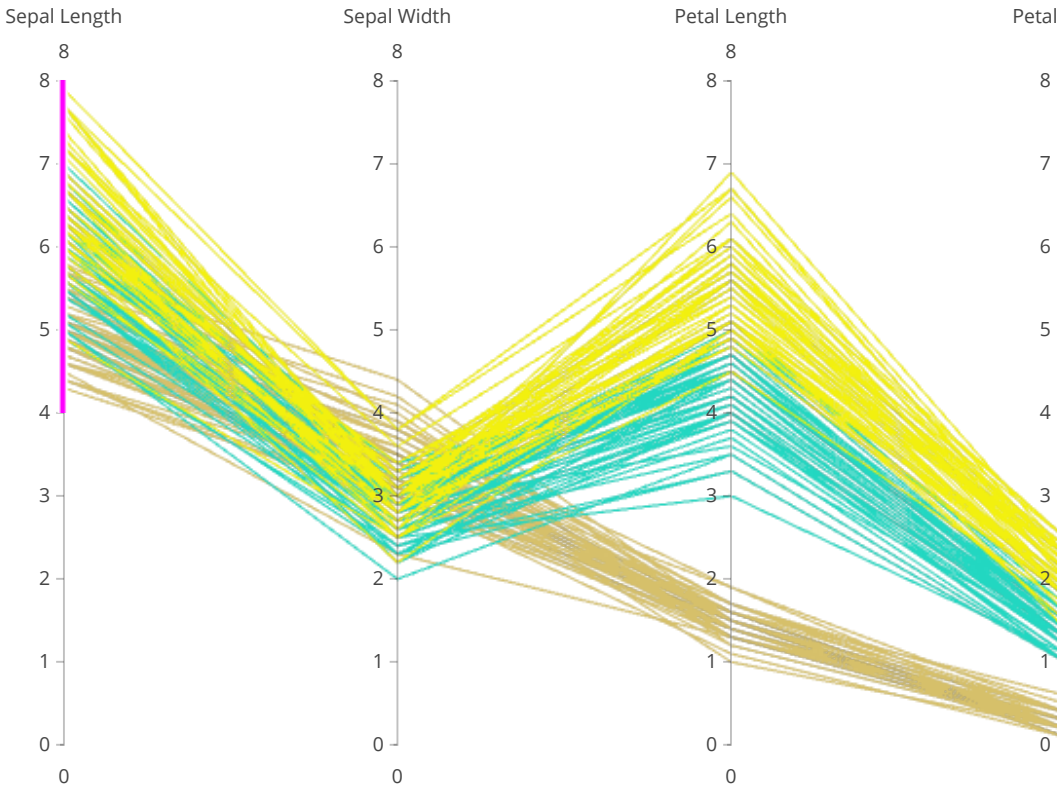


Basic Parallel Coordinates Plot

In [4]:

```
import plotly.plotly as py
import plotly.graph_objs as go

import pandas as pd

df = pd.read_csv("https://raw.githubusercontent.com/bcdunbar/datasets/master/iris.csv")

data = [
    go.Parcoords(
        line = dict(color = df['species_id'],
                    colorscale = [[0,'#D7C16B'],[0.5,'#23D8C3'],[1,'#F3F10F']]),
        dimensions = list([
            dict(range = [0,8],
                constraintrange = [4,8],
                label = 'Sepal Length', values = df['sepal_length']),
            dict(range = [0,8],
                label = 'Sepal Width', values = df['sepal_width']),
            dict(range = [0,8],
                label = 'Petal Length', values = df['petal_length']),
            dict(range = [0,8],
                label = 'Petal Width', values = df['petal_width'])
        ])
    )
]

layout = go.Layout(
    plot_bgcolor = '#E5E5E5',
    paper_bgcolor = '#E5E5E5'
)

fig = go.Figure(data = data, layout = layout)
py.iplot(fig, filename = 'parcoords-basic')
```

Out[4]:



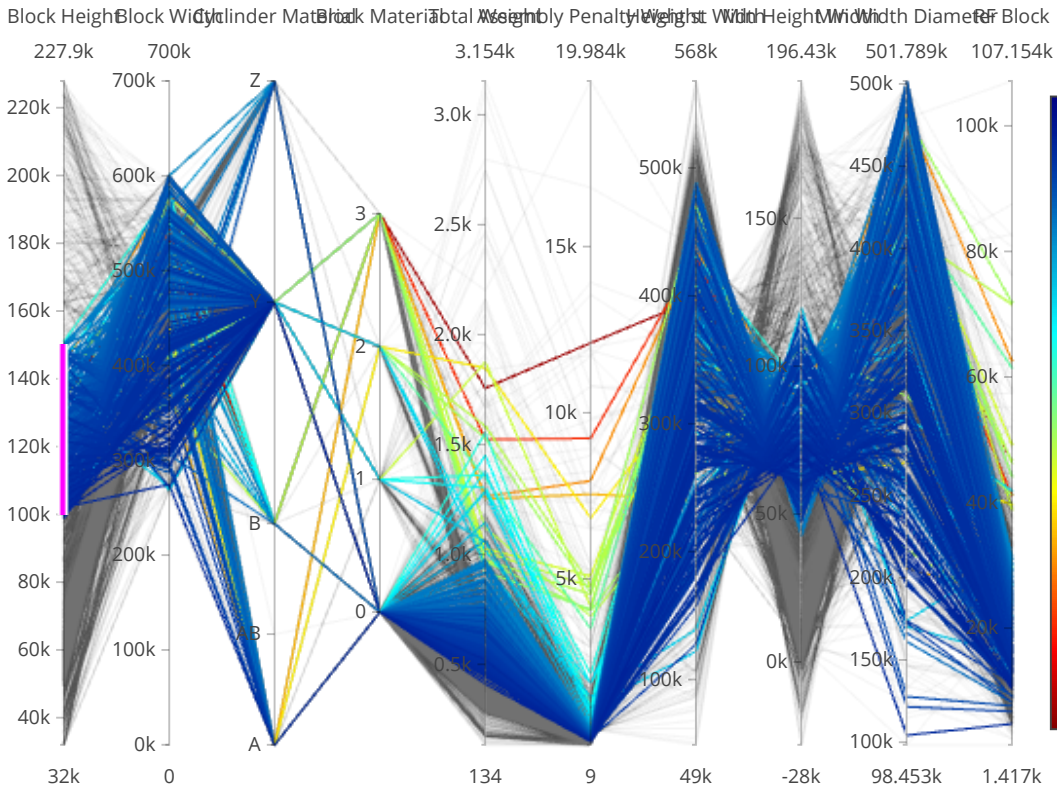
Advanced Parallel Coordinates Plot

In [5]:

```
import plotly.plotly as py
import plotly.graph_objs as go

import pandas as pd

df = pd.read_csv("https://raw.githubusercontent.com/bcdunbar/datasets/master/parcoords_data.csv")

data = [
    go.Parcoords(
        line = dict(color = df['colorVal'],
                    colorscale = 'Jet',
                    showscale = True,
```

```
                    reversescale = True,
                    cmin = -4000,
                    cmax = -100),
            dimensions = list([
                dict(range = [32000,227900],
                     constraintrange = [100000,150000],
                     label = 'Block Height', values = df['blockHeigh
t']),
                dict(range = [0,700000],
                     label = 'Block Width', values = df['blockWidth'
]),
                dict(tickvals = [0,0.5,1,2,3],
                     ticktext = ['A','AB','B','Y','Z'],
                     label = 'Cyclinder Material', values = df['cycM
aterial']),
                dict(range = [-1,4],
                     tickvals = [0,1,2,3],
                     label = 'Block Material', values = df['blockMat
erial']),
                dict(range = [134,3154],
                     visible = True,
                     label = 'Total Weight', values = df['totalWeigh
t']),
                dict(range = [9,19984],
                     label = 'Assembly Penalty Weight', values = df[
'assemblyPW']),
                dict(range = [49000,568000],
                     label = 'Height st Width', values = df['HstW'
]),
                dict(range = [-28000,196430],
                     label = 'Min Height Width', values = df['minHW'
]),
                dict(range = [98453,501789],
                     label = 'Min Width Diameter', values = df['minW
D']),
                dict(range = [1417,107154],
                     label = 'RF Block', values = df['rfBlock'])
            ])
    )
]

py.iplot(data, filename = 'parcoords-advanced')
```

Out[5]:



EDIT CHART

Reference

See https://plot.ly/python/reference/#parcoords for more information and chart attribute options!

Still need help?

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