

bqplot

Interactive Visualization in the Jupyter notebook

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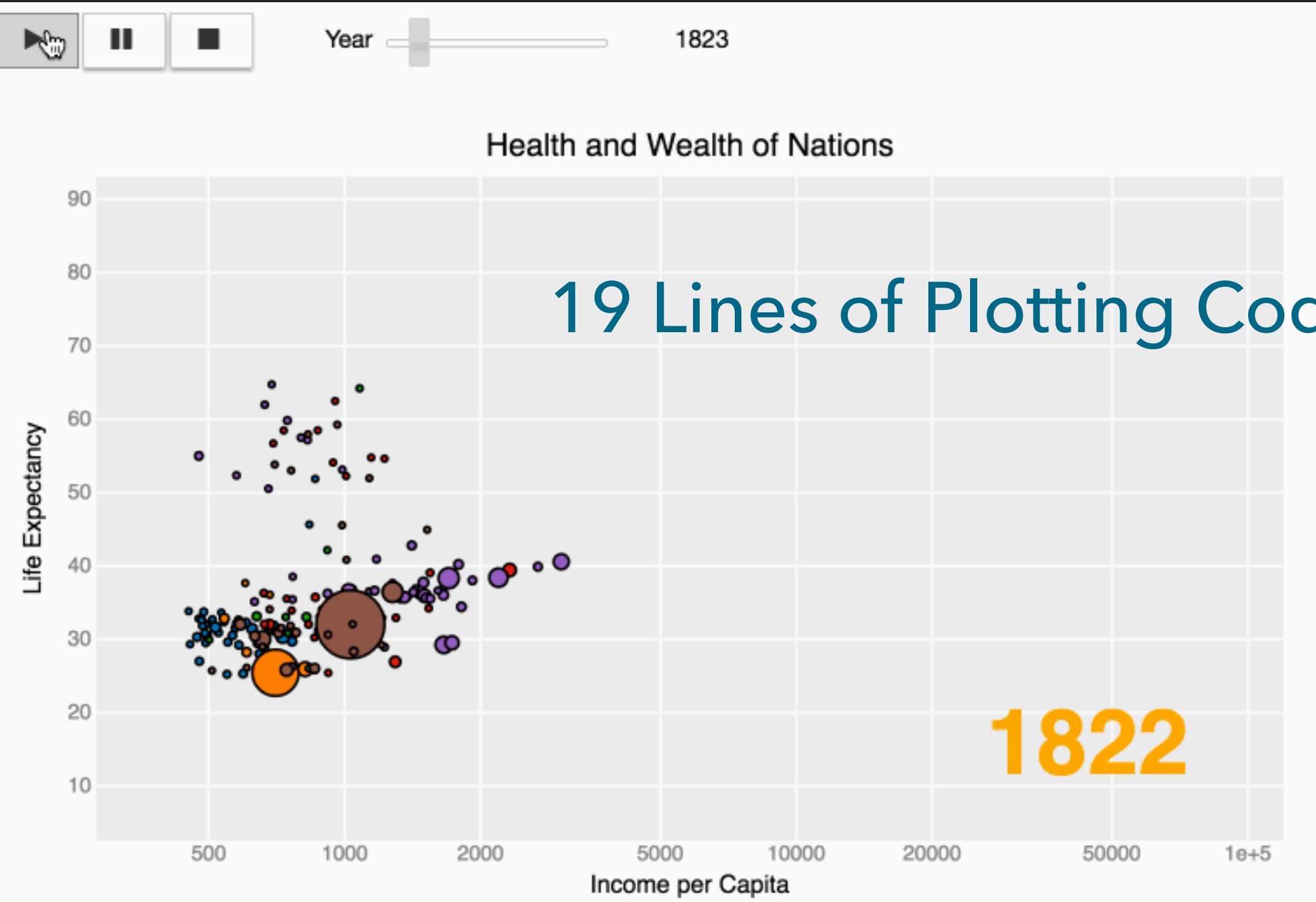
Srinivas Sunkara

Quantitative Researcher, Bloomberg

<https://github.com/dmadeka/PyGotham-2017>

PyGotham, 2017

- ▶ bqplot is an **interactive** plotting library for the Jupyter Notebook
- ▶ Apache License, available on GitHub
- ▶ Another plotting library? Geez, aren't there like 100 already?
 - ▶ matplotlib
 - ▶ ggplot
 - ▶ seaborn
 - ▶ Altair
 - ▶ Bokeh
- ▶ So why learn bqplot?



19 Lines of Plotting Code

```
In [16]: from bqplot import pyplot as plt
from bqplot import *
import pandas as pd
```

```
In [17]: data = pd.read_csv('Data/2016-results.csv')
```

```
In [15]: map_fig = plt.figure(title='Visualizing the 2016 Election Results', min_width=1300, min_height=800)
map_tt = Tooltip(fields=['name', 'color'], labels=['County Name', 'Democrat %'])
map_res = plt.geo(map_data=topo_load('map_data/USCountiesMap.json'), stroke_color='black',
                  colors={'default_color': 'black'},
                  scales={'projection': AlbersUSA},
                  'color': ColorScale(colors=['Red', 'Gray', 'DeepSkyBlue']),
                  color=dict(zip(data['fips'], data['dem.pct'])), tooltip=map_tt)
```

8 Lines of Plotting Code

Why bqplot?

- ▶ The notebook (and JupyterLab) both give us the ability to have web application type interactivity with minimal trouble
- ▶ Every element of the chart is an interactive widget - which can be bound to an arbitrary call back function
- ▶ Exposes the full power of d3 through a declarative and imperative syntax
- ▶ The ipywidgets ecosystem is growing (fast!) - a unified framework allows for easy interoperability (ipyvolume, pythreejs, ipyleaflet)

BQPLOT TEAM



Sylvain Corlay

QuantStack



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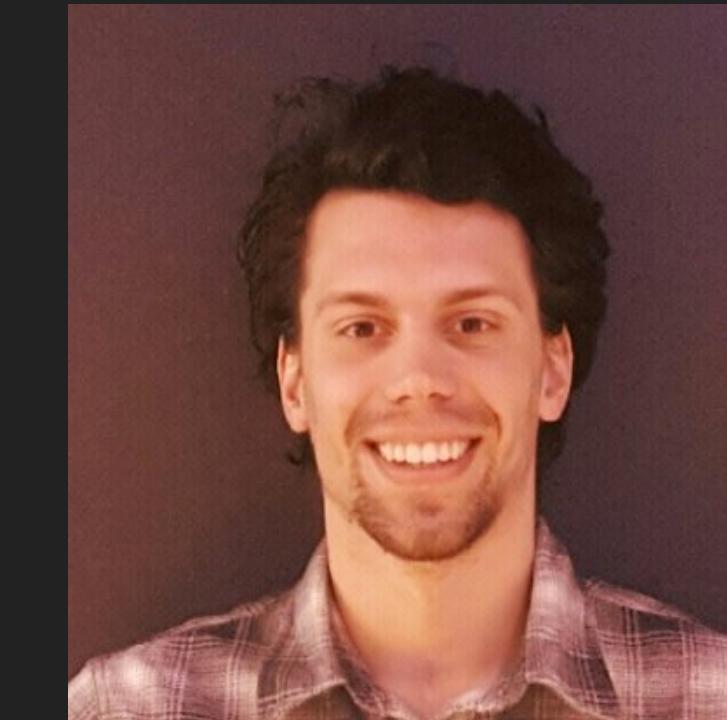
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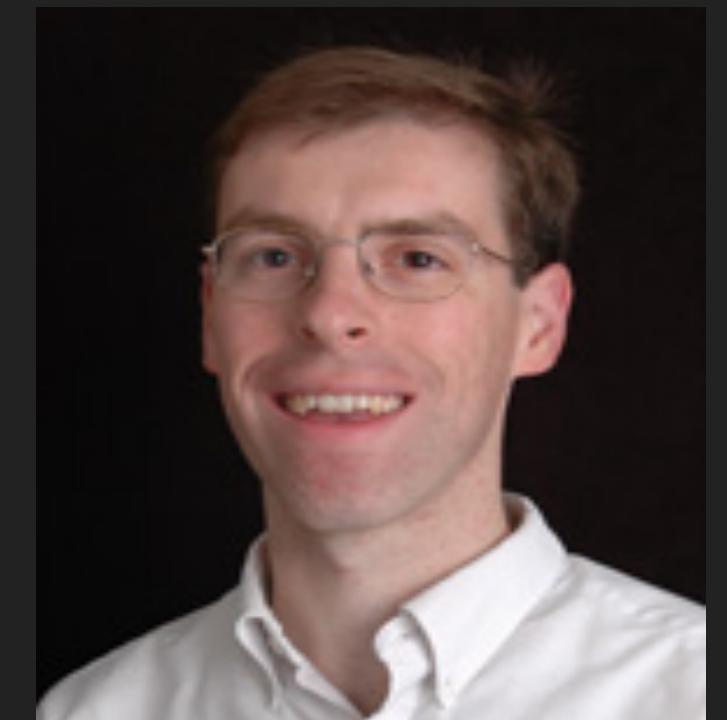
Chakri Cherukuri

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Join us!

www.github.com/bloomberg/bqplot