Interactive Visualizations with Bokeh

DataFest

About Bokeh

- Python library for data visualization
- Prides itself on being great for interactive visualizations
- pip install bokeh

Why learn data visualization?

- Results have little impact without clear communication
- Often, the best way of presenting the results of an analysis is with visualizations

Workshop Objectives

- Transform data into visualizations
- Customize and organize your visualizations
- Add interactivity to your visualizations

Steps to Create a Bokeh Visualization

- Prepare the data
- Determine where the visualization will be rendered
- Set up the figure
- Connect to and draw your data
- Organize the layout
- Preview and save your creation

1. Prepare the data

- Clean the data
- Pandas, numpy
- Transform the data to the best form for your intended visualization

2. Determine where the viz will be rendered

- How to generate and where to view your visualization
- Bokeh gives 2 options:
  - Static HTML file
  - Inline in a JuPyter Notebook <- We'll use this in this workshop

3. Set up the Figure

- Prepare the canvas for your visualization
- Customize everything: Title to tick marks
- Set up a suite of tools that enable user-visualization interaction

4. Connect to and Draw your Data

- Use Bokeh’s renderers to give shape to your data
- Bokeh gives you incredible creative freedom

5. Organize the Layout

- Organize multiple graphs
  - Grid-like layouts
  - Tabbed layout
  - Link plots together

6. Preview and Save!

- Explore your visualization
- Examine customizations
- Play with interactions

Demo Time!