lecture 17:
what now?

December 11, 2017

Takeaways

- You can visualize different sizes of datasets, doesn't all have to be Big Data

- Visualizations can serve different purposes (to entertain, to inform)

- Not necessarily difficult to do visualization, but you need interest

- Data isn't only numbers, there's a broad definition of data (images, words, physical things)

- Visualizations aren't all bar charts, there's a broad definition of visualizations (food, 3D, music)

- Specific techniques, theory, perception

- The author of a visualization should be ethical with presentation, as should the readers of the visualization

- Don't manipulate your data for your personal interests

- Does the visualization tell the truth? Does it convey what the data says?

- Always consider audience, what would be the most readable visualization

- Scaling can have a huge impact on what people take away from a visualization

- Visualizations should be "complete": axes, legends, labels, title, units

- Interactivity is an effective way to encode more data, and to engage viewers

- Some visualizations are immediately readable, others take time to read

- Don't overload your visualization— think about data/ink ratio, cognitive load

- Anything can be perceived as a visualization— including art

- Pie charts are less effective than they may seem

Doing more dataviz

- SDS 236: Data Journalism in the spring

- SDS 235: Visual Analytics

- Visualization research opportunities

  - Professor McNamara

  - Professor Crouser

- GIS courses on campus

- DataFest

Books

- Visualize This, Nathan Yau

- Data Points, Nathan Yau

- The Grammar of Graphics, Leland Wilkinson

- ggplot2, Hadley Wickham

- Visualization Analysis and Design, Tamara Munzner

- Dear Data, Giorgia Lupi and Stefanie Posavec

- The Book of Circles, Manuel Lima

- Raw Data: Infographic Designers' Sketchbooks

- The Visual Display of Quantitative Information, Edward Tufte (and the rest)

- Show Me the Numbers, Stephen Few

Tools

- R

  - R Graphics Cookbook

  - ggplot2 cheatsheet

  - plotly API

- d3

  - d3js.org

  - gallery

  - bl.ocks

  - d3.express

- Tableau

  - Professor Crouser

- Python

  - pandas

  - matplotlib

  - plotly API

Twitter

- Mike Bostock (@mbostock), creator of d3.js

- Nadieh Bremer (@NadiehBremer), visual cinnamon

- Lynn Cherny (@arnicas), data viz, text analysis

- Robert Kosara (@eagereyes) viz researcher, Tableau

- Giorgia Lupi (@giorgialupi), designer and artist, Dear Data

- Tom MacWright (@tmcw), map guy

- Amelia McNamara (@AmeliaMN), me

- Tamara Munzner (@tamaramunzner), professor of CS and visualization

- Stefanie Posavec (@stefpos), designer and artist, Dear Data

- Kim Rees (@krees), data viz at Capital One, formerly Periscopic

- Irene Ros (@ireneros), data viz, formerly of Bocoup, OpenVisConf

- Fernanda Viegas (@viegasf), Google research group, wind map

- Hadley Wickham (@hadleywickham), creator of ggplot2

- Nathan Yau (@flowingdata), FlowingData, Visualize This, Data Points