Class #5 -- 2 Mar 2017

Data & ideas for projects

- ○ Continue collecting ideas from students
- ○ APIs are good, shapefiles & GeoTiffs are OK, proprietary formats are bad
- ○ Data must be public and free (i.e., open data)
- ○ Ideas...
  - ■ https://www.consumerfinance.gov/data-research/hmda/ -- HMDA
  - ■ https://www.thehubway.com/datachallenge -- HubWay data challenge
  - ■ Mike Bostock's "Command-line cartography" -- powerful, ACS data

"Let's Make a Map" by Mike Bostock

- ● https://bost.ocks.org/mike/map/
- ● Provide an overview of the document
  - ○ First few sections talk about data preparation
  - ○ Discuss command-line tools --
  - ○ Naturalearth.org data converted from sphapefiles to topojson
- ● Look at simple the SVG <path> element
  - ○ https://developer.mozilla.org/en-US/docs/Web/SVG/Tutorial/Paths
  - ○ Manipulate the example in a JavaScript playground
- ● Show how to decompose the elements used in the demo
  - ○ Update for d3 v4
  - ○ Show how the code is turning topojson to geojson to an SVG path element
  - ○ d3.geoMercator & d3.geoAlbers
    - ■ Discuss scale and translate
    - ■ Use getters to find out values being used
    - ■ Use setters to move the map around
  - ○ Dissect the code to show how the id is used to color different counties
  - ○ Look at how labels are added using text elements
  - ○ Review data binding -- enter, update & exit selections

Assignment #5 = Assignment #4 (modified slightly)

- ● Modify the result from Homework #3 as follows…
  - ○ Add magnitude-dependent styling for the earthquakes
  - ○ Add a title to the plot
  - ○ Add labels that indicate the number of earthquakes of various sizes
  - ○ Add a legend for the styling
- ● Add a legend. Create your own custom legend, or adapt this reusable legend template
  - ○ https://bl.ocks.org/pbogden/86a9f77dd337ee7b1f8d
- ● Put your final result in a gist that's linked to your github account
  - ○ Consider using blockbuilder.org to create your gist
  - ○ See how easy it is: http://github.com/umbcvis/fiddle
- ● **Projects** -- Be ready to discuss your project in the next class. Ideally, you will have an idea for data and and a "story" you'd like to tell with it. I'll help you scope the project.