Faculty Author: Virginia Kuhn
Course: IML 440: Interdisciplinary Thesis
Department or School: Media Arts and Practice, School of Cinematic Arts
Student Population: Undergraduate seniors
Duration: semester

Deliverables:
• Project plan with chosen data set
• Data set visualized in 3 ways
• Written report describing the visualizations

Keywords: comparative data visualization, thesis, visual literacy, images, infographics

Description

Summary

Students identify a data set that serves their senior thesis project’s main research question, visualize the data in 3 ways (e.g. pie chart, word cloud, scatter plot, bar graph), and write a 750-1,000-word report describing how each visualization changes the meaning of the information based on the way it looks.

Assignment Goals

The information visualization assignment asks you to explore the ways in which data become information and, further, the ways in which information shifts its meaning depending on its context and presentation. This assignment helps students to do the following. For full instructions, see: http://virginiakuhn.net/2014/12/iml440dataviz/
• move from research into production
• critically decode and encode digital, image-based media
• acquire data literacy, as well as visual literacy
Recommended Tools

- LA City Open Data
- Gap Minder
- Many Eyes
- Periodic Table of Visualization types
- Plot.ly (beta freeware tool for analysis and visualization)
- Text mining tools overview
- Wordl word clouds
- Information is Beautiful
- Info Aesthetics
- Visual Complexity
- NodeXL (works with Excel)
- Visualizing economics
- Flowing Data
- Mondrian
- Tableau Public
- D3

Faculty Author Advice

Allow more time for students to cull data between project plan and when it’s due; about a week more should be spent on this part. The perception is that data is very easy to get at and that it is cleaned up in the way you want it. For example, a student couldn’t find data on her topic and needed to create a data set. It was hard for students to get the data they needed from sources like the New York Times from the 1960s because they weren’t searchable. There are numerous cases like that for web scraping for APIs. That was the best lesson and that’s why the data literacy aspect was so key and led them to think about who decides what a data point is, and what is data, really.