CMPS 263 2018 Winter
Data Programming for Visualization

Final Project: Idea Development: Stage II
Due Date: February 5, Monday, 11:59pm
(Absolutely no late submissions)

Each student will develop the project proposal individually following structured guidelines:

1. A Title for the Project

2. Purpose or objective of the project (in less than 4 or 5 sentences)

3. Provide Data sources with appropriate agency names and web links

4. Provide Relevant Visualization sources with appropriate titles, agencies, time, and web links

5. Any additional references

Host the above information using an html/css file (and possibly D3) with a compact clutter-free presentation similar to examples described below (and discussed in the class) including "Created by" (adding your full name as it appears on the class roster; no nick name please!), “email” (provide your email address), "Designed for", with three columns: (i) Data Sources, (ii) Visualization Sources, and (iii) References (if any). Additional two columns on files submitted and code sources will be added later.

An optional web link can be added stating, "Further details here" (must also be compact, clutter-free, and relevant and no more than 1 page at most).

The project must be submitted on github. Weblink must be submitted on canvas.

Guidelines

Grading of this assignment will be brutal. If you do not adhere to the guidelines, you may risk losing most or all of the points.

1. Proposed topic must be of public policy interest to more than 1 million people, ideally more than 100 million people, and of great interest to society. Please note that the description of the course emphasizes "scientific inquiry to bear on large-scale societal problems. Applications include inequality, poverty, water, energy, environment, health, education, and democracy."

2. The title should capture the intent of the proposal.

3. Purpose/objectives should be described. Strive to be insightful rather than just presenting the data for the sake of curiosity satisfaction. Don't plan to throw the data to the user and let him/her figure out what to do with it. Rather take a public policy stand and convey a focused message or insight. *It is expected that students have watched Simon Senek's Ted talk on "Why" (rather than what or how) and grasped the purpose of the visualization (discussed in the lecture with supporting examples on January 30. Attendance will be taken in the class on this Tuesday)*. In summary, your visualization must strive to be insightful; even better, your visualization tells a story; even more compelling, your visualization urges people to action; or the supreme achievement: your visualization evokes emotions!

4. Must follow the guidelines of *compact and clutter-free*. It is expected that students are familiar with videos such as "Data better looks naked" supported with examples as presented on Jan 30.

5. Data Sources must be listed with proper names of agencies and if appropriate affiliations and timeline, with associated web links. If data source is huge, please point to specific location or a brief phrase describing which data will be used.

6. Links to visualizations related to the proposed topic must be included with appropriate names of visualizations, creators, time etc. There are close to 75 previous class projects hosted on canvas. Students are expected to have viewed at least 15 past projects including the ones closest to the proposed project. *The closest project(s) must be cited under "Visualization Sources"*. If similar or better visualizations are easily discovered later, the proposal may be disqualified. If you cannot find anything, state that no visualization was found on the web.

7. Additional references to articles or additional information on the project may be added as a separate link in a compact one page (and no more!)

8. Guidelines to add "created by", "email", "designed for" with a columnar presentation of data sources and visualization sources must be adhered to.

9. If something is not clear, ask, ask, ask again, preferably in the class on Jan 30 and Feb 2.

10. If you do not submit this assignment on time, you must meet me during my office hours at the first available opportunity along with a copy of this assignment.

Examples (with minor edits from the projects' websites):
1. https://sureshlodha.github.io/CMPS165_Fall2016_FinalProjects/ClimateChange/
Climate Change: 1980-2015

The increasing carbon dioxide emission is a causation of rising sea levels, increasing global temperature, and decreasing artic sea ice. Although deniers call anthropogenic climate change a myth, the trends in data contradict their claims that these phenomena are coincidental and unrelated.

2. https://sureshlodha.github.io/CMPS165_Fall2016_FinalProjects/BRICS_HDIGDP/
BRICS: GDP and Human Development Index 1970-2050

Of the five BRICS nations: Brazil, Russia, India, China, and South Africa, Russia dominated both GDP and HDI up until the 1980s. However, the collapse of the Soviet Union in 1991 weakened Russia's GDP and HDI growth significantly. In GDP, Brazil, China, and India became comparable to Russia as early as 1996. Projections indicate that Brazil, China, and South Africa will catch up to Russia's HDI by 2023, with India on track to catch up some time after 2050.

3. https://sureshlodha.github.io/CMPS165_Fall2016_FinalProjects/ASEAN/
ASEAN: Human Development Index
Of the 10 ASEAN countries, Brunei and Singapore are on the top much ahead of the rest of the countries. Singapore also has the highest life expectancy and years of schooling.

Created by: Aarav Melissa Xu in collaboration with Suresh K Lodha
Designed for: CMPS 263, Data Discovery and Visualization, Winter 2018
Data Sources: United Nations: Department of Economics and Social Affairs
Visualization Sources: San Francisco vs LA

4. https://sureshlodha.github.io/CMPS165_Fall2016_FinalProjects/CEOvsWorkerPay/
CEO:Worker Pay Ratio: S&P 500 companies, 2014

CEOs in American companies make a disproportionate amount of money when compared to the average salary of their respective employees. This visualization needs improvement by showing the pay ratios on the horizontal scale and depicting the median correctly.

5. https://sureshlodha.github.io/CMPS165_Winter15_FinalProjects/FruitsAndVegetables/
Inside Fruits and Vegetables

Inside 100 fruits and vegetables, we visualize how they stack up with respect to various constituents: sodium, potassium, calcium, fiber and also with respect to protein, carbohydrates, fat, and sugar. Perhaps you can use this to decide which fruit and vegetable to consume today!