CSCI E-171 Process Book

Final Project

Visualizing Elasticity in U.S. Presidential Elections

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Overview and Motivation.

Various factors have been found to affect election outcomes or how people vote. Demographics like race, poverty level, income and gender have always been factors in various elections worldwide.

In this Project I build upon visualisation data using choropleth and extend our view of the data using a treemap.

The main choropleth visualises presidential election data from 1980 to 2012 while the tree map provides a view of the various election demographics and variables.

The political parties take the normal color code for both the choropleth and the treemap i.e blue for democrats and red for republicans.

The slider ranges from 1980 to 2012 election years while the drop down menu provides demographics for the treemap. It is easy to view both visualisation by “General Election” or “Political Party”.

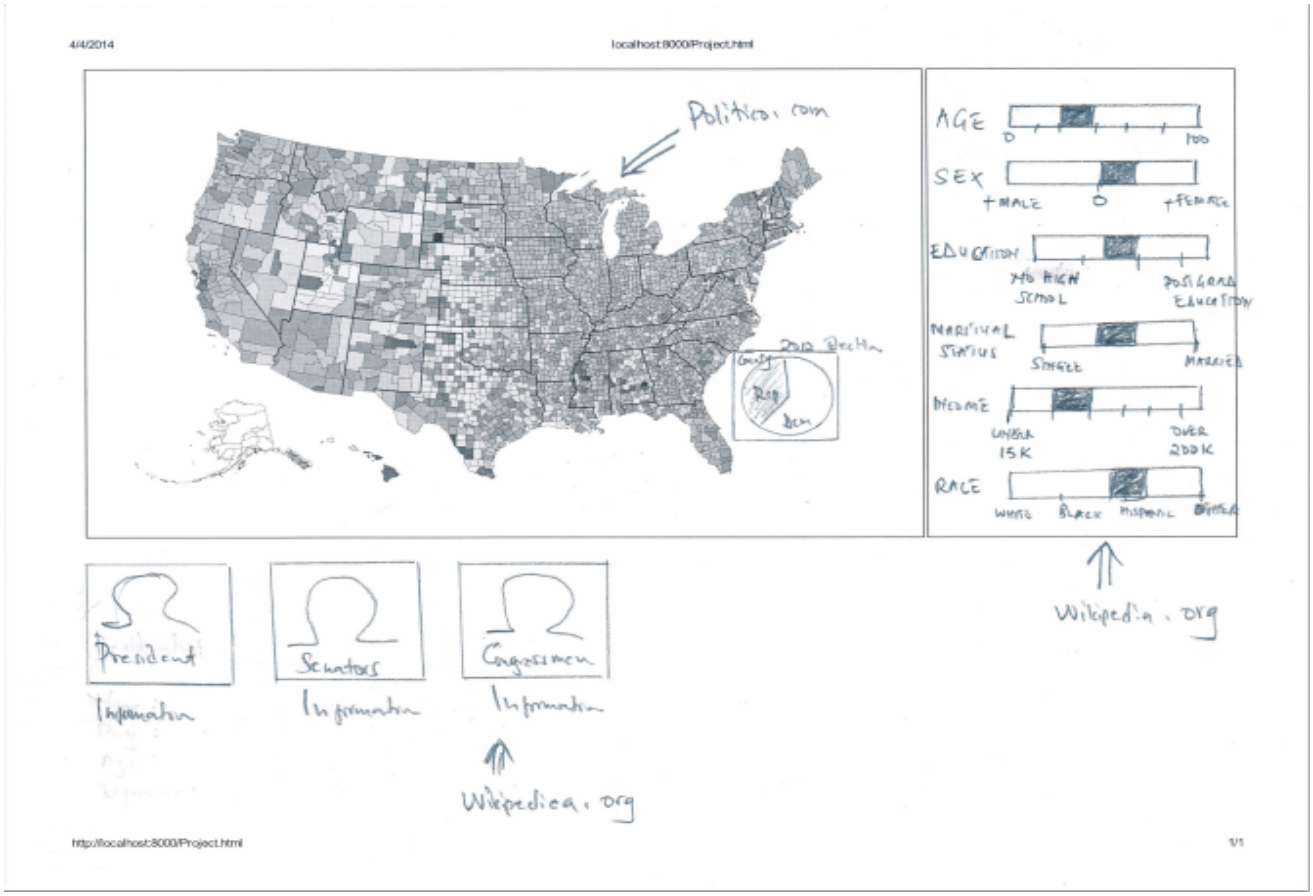
Related Work.

Various media outlets have visualised how various groups vote in the general elections nationwide. Sites like Wikipedia, New York Times and CNN have impressive visualisations on election but most of the are state level and do not incorporate data at county level.

In this project a seek to incorporate county level data in the visualisation.

Initial Sketch.

The initial idea was to have a choropleth with various slider that were to be used to vary the demographics with visualisation of all elected officials in that state.

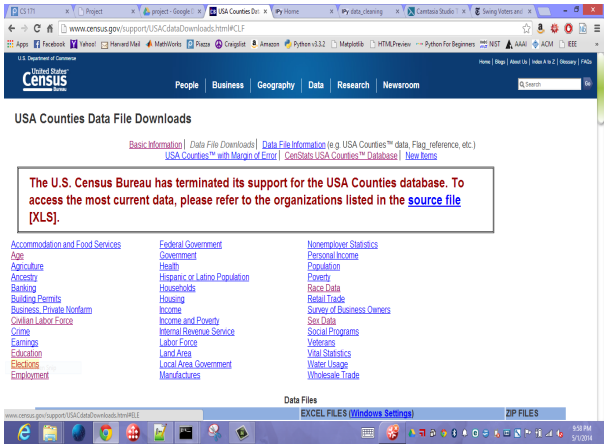


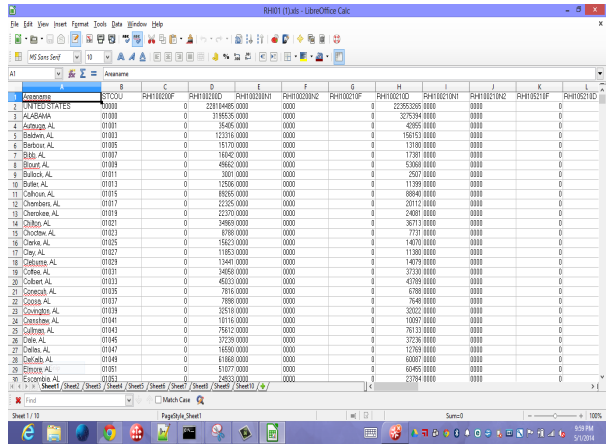
Data Scraping and Cleanup.

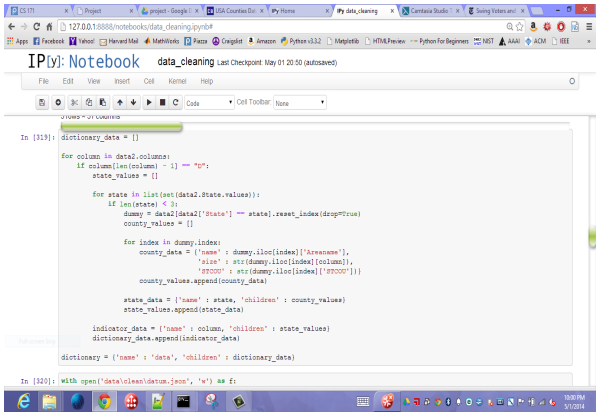
Data was collected from [The U.S. Census Bureau](). The data is raw .txt format.

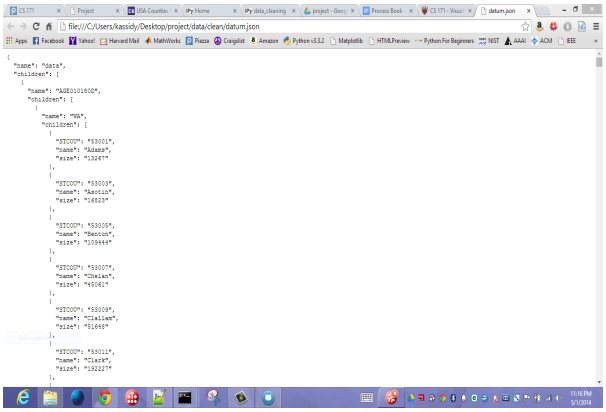
Using Python, all the data was cleaned and formated to .csv and .json file formats that were used in the choropleth and treemap respectfully.

Alot of time was spent in this process. Wost work was done on creating and formatting .json files that were to be used for the treemap.





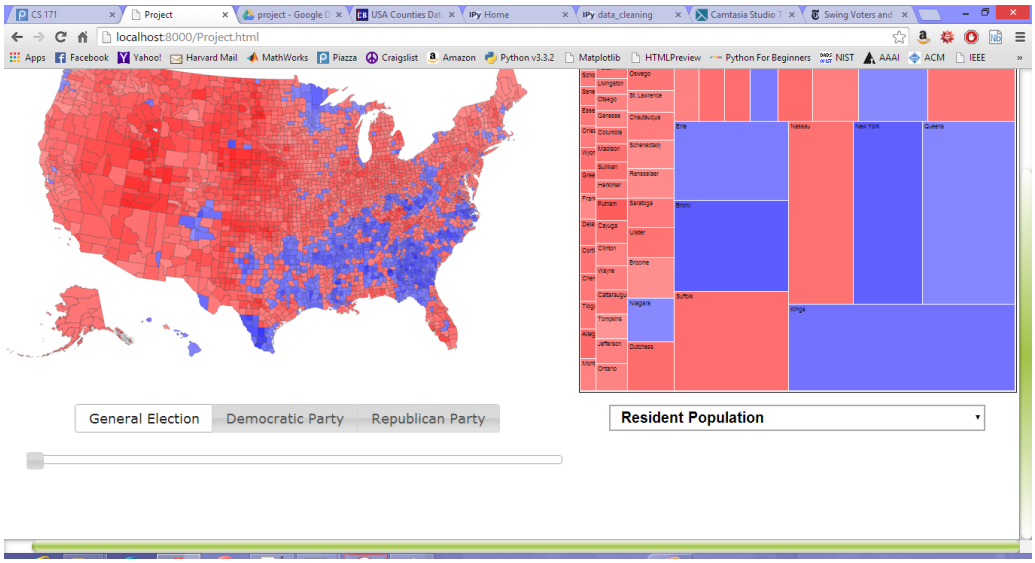


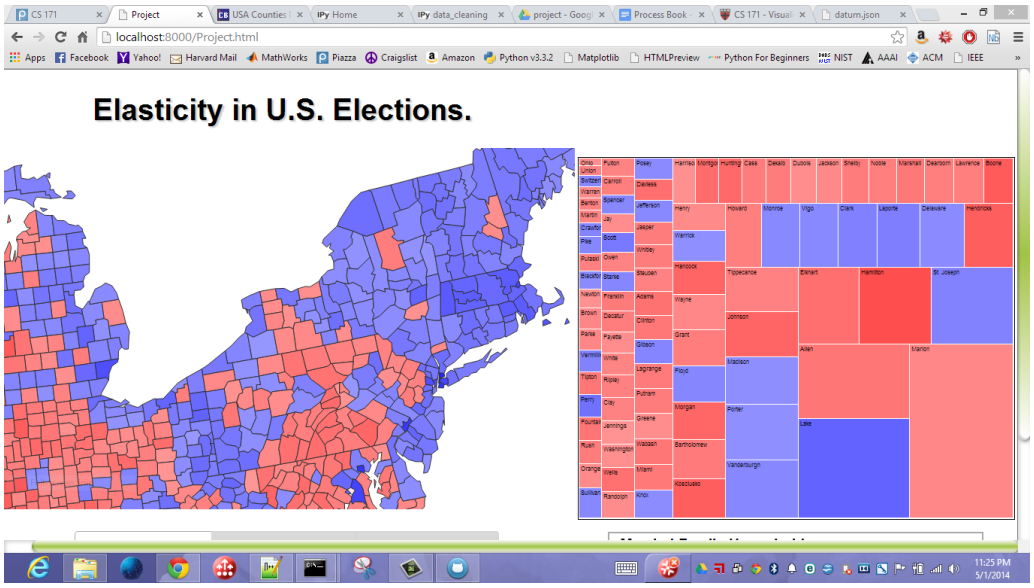


Design Choices.

1. 1. One can view both the choropleth and the treemap side by side.
2. Tooltip provides name and state of the county on mouseover.
3. Real Time treemap update on mouse over a state.
4. Ability to view map over the both political parties or the general election
5. Drop down menu for easy access to demographics.

Final Visualisation.





Exploratory Data Analysis.

The final visualisation tells a story of general elections in United States of America from 1980 to 2012.

From the visualisation, we learn how various demographics have shifted from one party to another. For instance we can see that Hispanics have shifted from being deeply Republican to strong Democrats over the years.
Like wise we see how income and poverty levels have shifted how urban voters have voted throughout the years.

This visualisation should be of interest to anyone who wants to explore voting patterns in the USA.

Likewise, it can be extended to explore any other data from the US Census Bureau.