**Progress Report**

So far, we have tested out the following ideas on the database of the 112th and 113th US Congress:

1. Comparison of a Congressperson’s position on a vote with the President’s (as agrees and disagrees over the four years)
2. Comparison of two Congresspersons’ votes over time
3. Comparison of the subjects of the bills two congresspersons agreed and disagreed on
4. A list of congresspersons more and less similar to Congressperson A than another, selected Congressperson B is to A.

We have written functional SQL queries that give these results, and have tried some visualizations to convey the information, using highchart.js for charts and word clouds for the bills’ subjects. We intend to optimize these queries for readability and performance; furthermore, we will add additional features to make the information provided more accessible and interesting.

Before we submit the project, we will implement several more such queries to extract additional information. First is the ability to compare a congressperson to their party leadership, providing information about their willingness to cross the aisle. Another is computation about party-wide agreement/disagreement specifically with regard to bill subjects, which puts a new spin on past work (<https://www.washingtonpost.com/news/wonk/wp/2015/04/23/a-stunning-visualization-of-our-divided-congress/>).

More significantly, we will implement a dynamic, web-hosted version of the queries. Currently, we can only select representatives by editing the query and can only do visualizations by hand-entering the data. We will implement a version that allows users to select representatives from a drop-down or similar-style menu to select the congressperson(s) in question for each of these queries. Carrying over from our original proposal, we would also like to provide users as many options as is feasible for the visualization.

At this point in time, we have no additional changes beyond the addition of new queries and visualizations mentioned above. The current visualizations can be viewed at <https://www.math.duke.edu/~sb337/CS316>.