Mid-Term Project Proposal

Bruce Mallory

"Bruce, life's not fair – get over it." -Bruce's dad

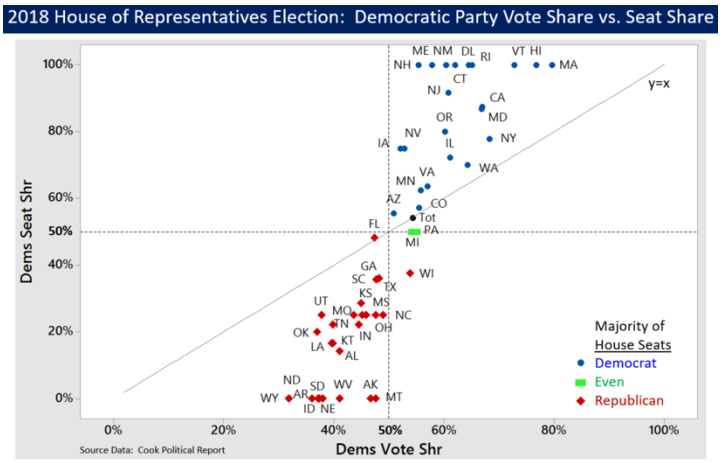
(1) Personal Statement

My job goal is to work for social change using my limited data analysis skills. A dream job for me would be to work for the Brennan Center for Justice, which "focuses on the fundamental issues of democracy and justice."

(2) My Question

IF the election of state representatives to the US Congress was "fair," it would be proportional. In North Carolina, in 2018, the Democratic candidates (as a group) received 48.3% of the votes cast. That year, only 3 of the 13 (23%) representatives sent to congress from North Carolina were Democratic.

The graph to the right shows the Democrats' vote-share vs. seat-share for the 50 states in the 2018 election.



After the 2010 Census, all states redistricted to account for the reapportionment of the 435 House Representatives. Across the country, there were six types of redistricting authorities as identified in a 2012 report done by the Brennan Center for Justice, including: Democratic controlled, Republican controlled, independent, and court controlled.

For this project, I propose to examine whether the fairness of representation is related to who did the 2010 redistricting. I will use data from 2012, 2014, 2016, 2018 elections (and 2020 if I can get it in time). And I will use two measures of "fairness." First is the vote-share vs. seat-share comparison shown above. The second measure, referred to as the "efficiency gap", was devised by N. Stephanopoulos and E. McGhee from the University of Chicago. It's a metric that quantifies the percentage of a given party's votes that are "wasted" (e.g. if a congressional district is "packed" so that most voters are of one party, then the votes above the 50% threshold are "wasted.")

(3) My Data

Through the "MIT Election Data + Science Lab" I was able to download congressional election results for the years 1976 to 2018. This .csv is in my GitHub.

(4) My Timeline

I appreciate the outlining of the steps of this project (EDA -> Data Processing -> Modeling & Validation -> WriteUp). And I will strive to complete each of the four steps in a manner proportional to the 3.5 weeks between project approval and submission.