Election Predictions

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President, Vote Share

Average of 538 + Average of polls over the past two weeks.

President, Turnout

To generate predictions on the basis of turnout in prior years, we fit a Bayesian Heirarchical Regression Model using BRMS in R. Specifically, we regressed log turnout in each region on the number of eligible voters in each state, allowing this relationship to vary by state. Our model also includes a secular time trend which accounts for changes in turnouts across all states over time. We generated predictions from this model by giving it the year (2024), and the total number of eligible voters in each state.

Senate, Vote Share

Average of 538 + Average of polls over the past two weeks.

Senate, Turnout

We used another Bayesian Hierarchical Regression Model for this challenge, in a similar manner to how we approached task 1. We regressed the fraction of presidential voters who voted for senate on a state-level intercept on which we placed a hierarchical prior, as well as a secular time-trend. Predictions were generated by asking the model to forecast the outcome in the next year (2024) for all geographies.

Data Used:

- MIT Open Elections Data on U.S. Presidential Elections, 1976-2020 (link)
- MIT Open Elections data on U.S. Senate statewide votes, 1976–2020 (link)

House, Vote Share

A no-skill forecast. We want to see how well we do by forecasting that the house vote will be the same as the presidential vote in each district.

House, Turnout

We used the same model as for the senate turnout task, but fit it to house data. Predictions were again generated by asking the model to forecast the outcome in the next year (2024) for all geographies, but we made some ad-hoc adjustments

for places where candidates were running unopposed or several candidates for the same party were running in the same race.

Data Used:

- MIT Open Elections Data on U.S. Presidential Elections, 1976-2020 (link)
- MIT Open Elections data on U.S. House statewide votes, 1976–2020 (link)

Time State is Called

These predictions are entirely back-of-the envelope, and based off the time it took each state to report in prior years, how close we expect the state to be, and any rule changes from last cycle that we are aware of.

Data Used:

- Calling the 2020 presidential race state by state, AP News
- Calling the presidential race state by state, AP News
- It Took Two Weeks to Call Every State in 2020. This Is When to Expect Results This Year, New York Times