

Predicting the party changes of North Carolina voters

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December 4, 2019

General Idea:

Of North Carolina voters who are planning to change/have changed their party affiliations in 2019, *can we accurately predict which parties said voters are going to change to?*

Data - Advantages and Disadvantages

Advantages

- North Carolina voting data is robust and plentiful
- Specific voter change data is easy to access and interpret

Disadvantages

- Existence of smaller parties confound data relationships
 - These are the Green Party, the Constitutional Party, and the Libertarian Party

Solution:

Consider only three major ‘parties’:

Democrat, Republican, and Unaffiliated.

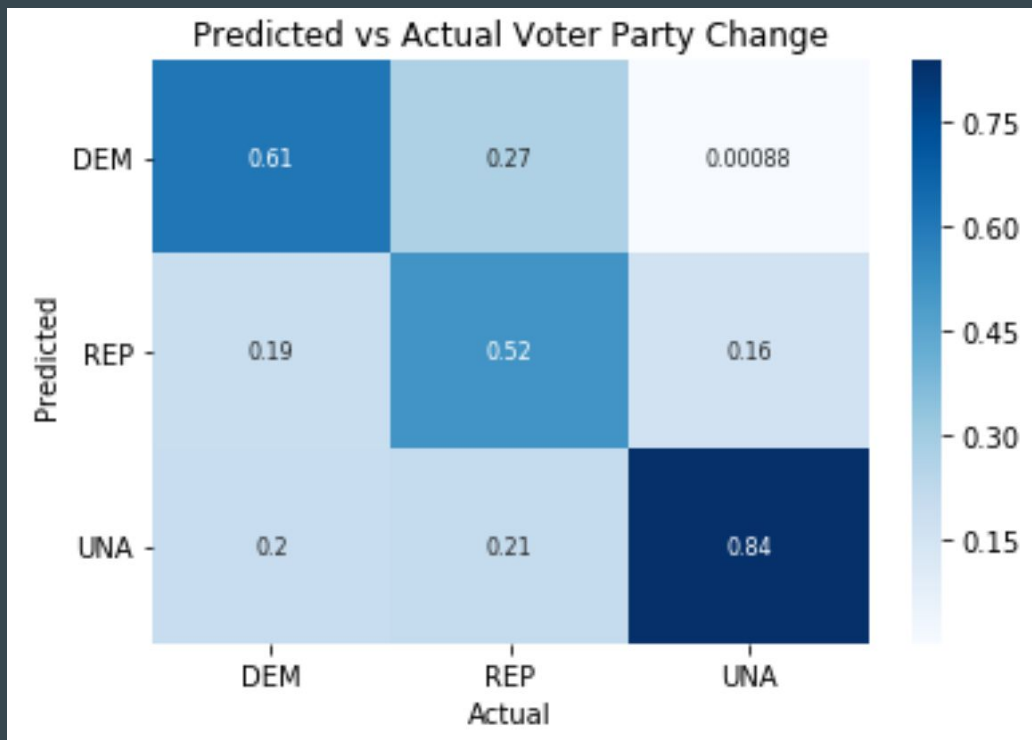
This data represents ~97% of total voter change data.

How We Make Our Prediction

We rely solely on each voter's *original party* (DEM/REP/UNA) and *county of residence*.

| | county_name | party_from | party_to |
|--------|-------------|------------|----------|
| 3085 | BEAUFORT | DEM | UNA |
| 19464 | COLUMBUS | REP | UNA |
| 113282 | WAKE | UNA | DEM |
| 43989 | GUILFORD | DEM | REP |
| 22029 | CUMBERLAND | DEM | UNA |

Prediction Results



Algorithm correctly predicts the new voter party ~70% of the time!

Conclusion

- Relatively strong predictor of party change (~70% of data predicted correctly).
- Especially effective predicting 'Unaffiliated' changes (>80%).

Future areas to research

- Increasing the prediction features
 - Including information on voter engagement (when voter last voted, how often they vote, whether they vote in primary vs general elections, etc.)
 - Checking data across multiple years
 - Combining (analyzed with 2019 data) and contrasting (compared against 2019 data)
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NOVEMBER
IS COMING

#IREGISTERED

Thank you for your time...and remember to register and vote!