

Registered Voter Participation in Union County, NC

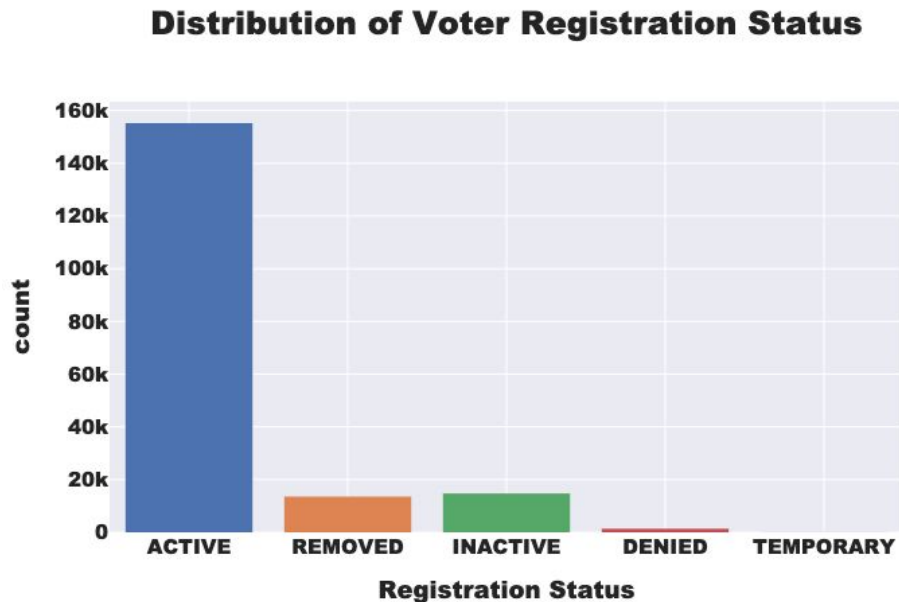
Max Steele

Purpose

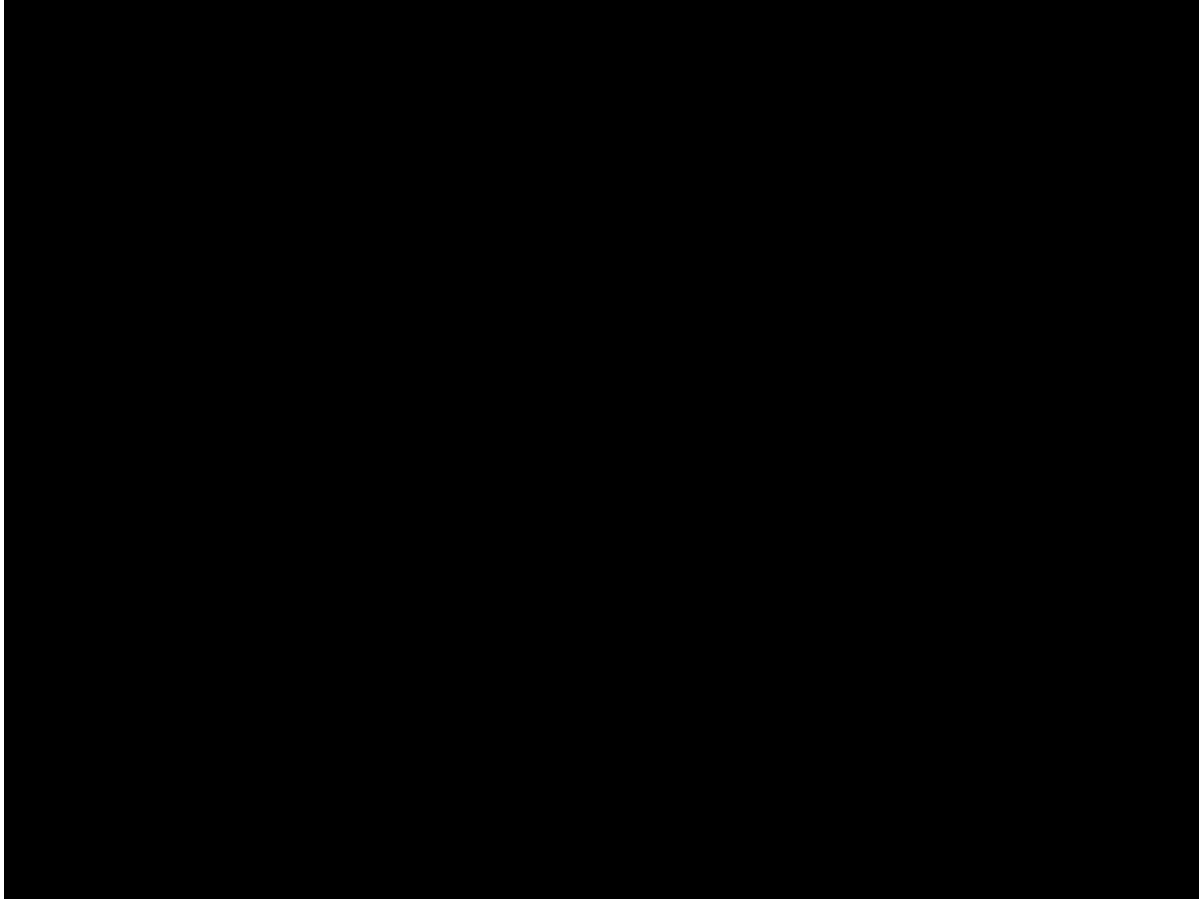
- Understand trends in voter participation in Union County
 - 2012, 2016, 2020 general elections
 - Create a dashboard for exploring trends and comparing elections
 - Use ML to investigate relationships between demographics and participation
 - Provide insights into increasing turnout for Democratic candidates
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Obtain & Scrub

- NCSBE
 - Voter registration records
 - Voter history records
- Data preparation and cleaning
 - Drop duplicate records
 - Drop “Removed” and “Denied”
 - Merge records on unique NCID
- Separate datasets for 2012, 2016, and 2020
 - Filter voters based on:
 - Registration date
 - Age



Explore: Interactive Dashboard



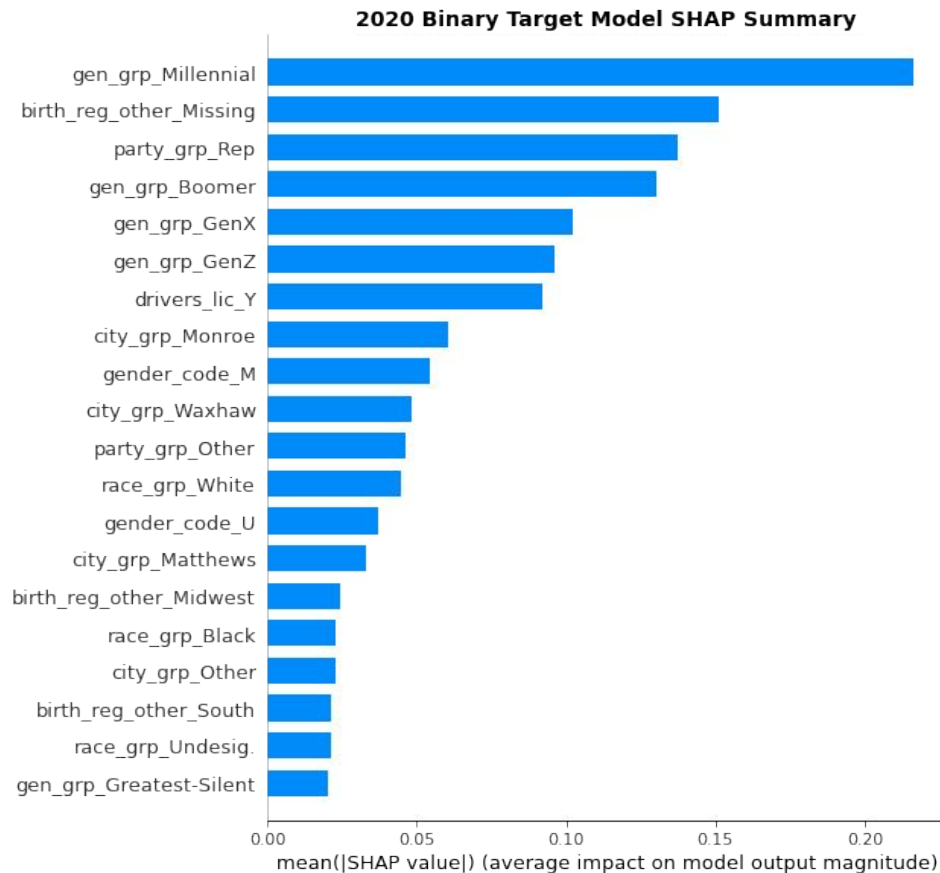
Modeling

- **Predicting Vote vs. No Vote:**

- **Generation**
- **Political Party**
- **Race**
- **Gender**
- **Birth Region**
- **Drivers License**
- **City**

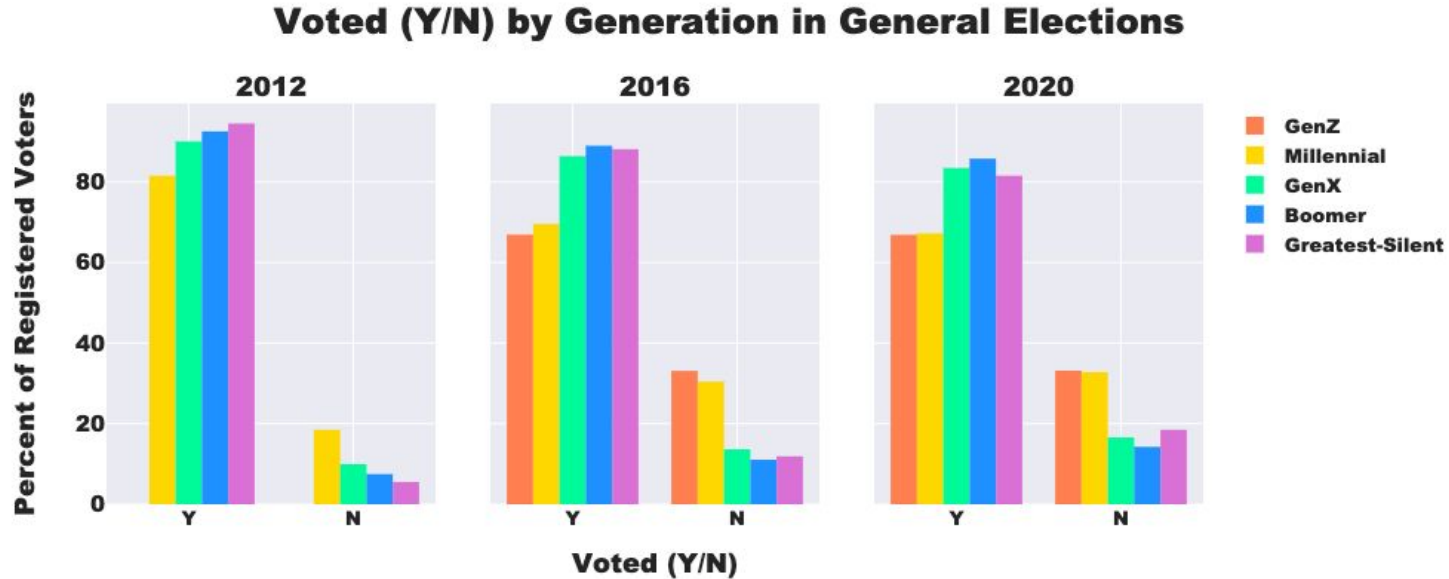
- **Overall accuracy**

- **2020: 66%**
- **2016: 69%**
- **2012: 66%**



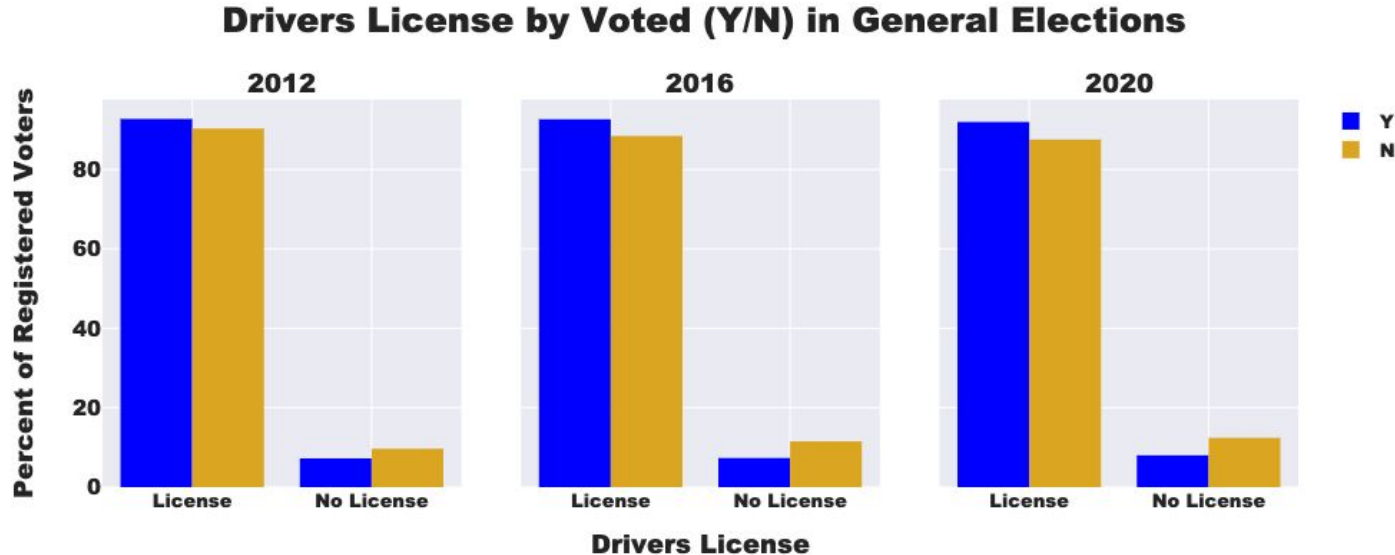
Recommendations

- Voter Age:
 - Focus on getting Gen Z and Millennials to the polls



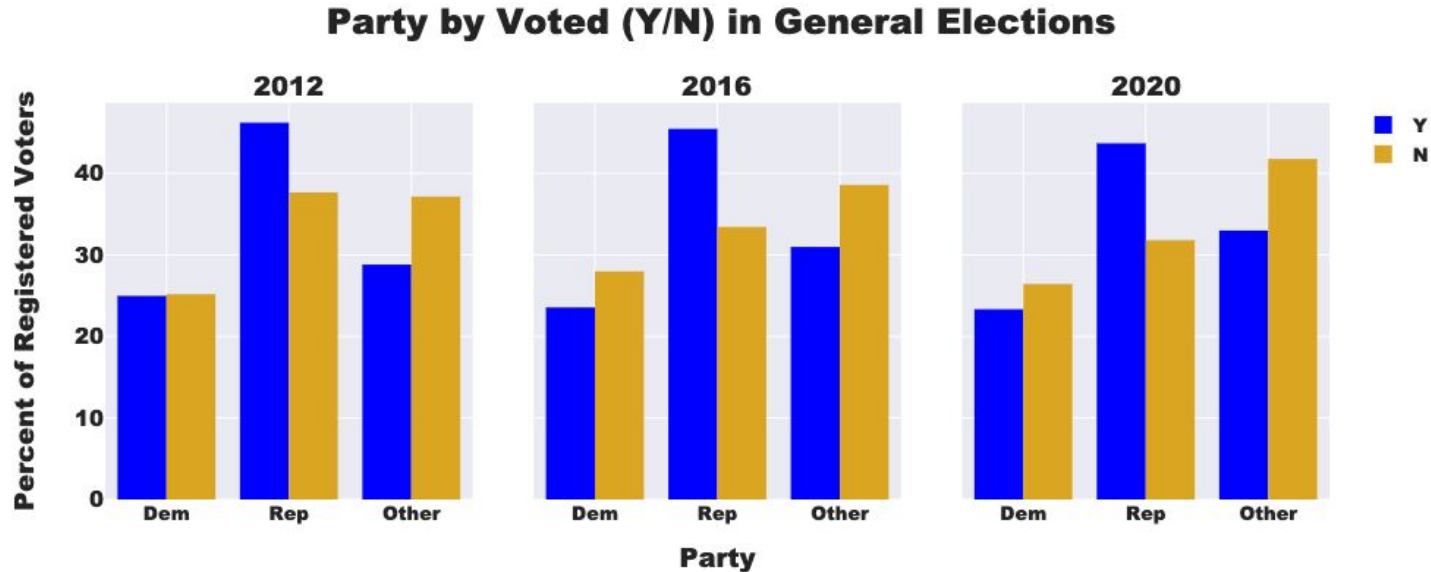
Recommendations

- Drivers License:
 - Clear communication around voter ID laws
 - Transportation to and from polls



Recommendations

- Political Party:
 - Appeal to unaffiliated voters and members of minor political parties



Summary

- Union County Registered Voters dashboard as a tool for exploring:
 - Demographics
 - Participation in recent elections
 - To increase voter turnout for Democratic candidates:
 - Gen Z and millennials
 - Clear communication around voter ID laws
 - Unaffiliated and minor party voters
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Future Work

- Investigate interaction effects among demographic features
- Scale up to statewide models
- Add to dashboard
 - Trends in voter registration status
 - Compare current registered voter population to U.S. Census data

Thank you!

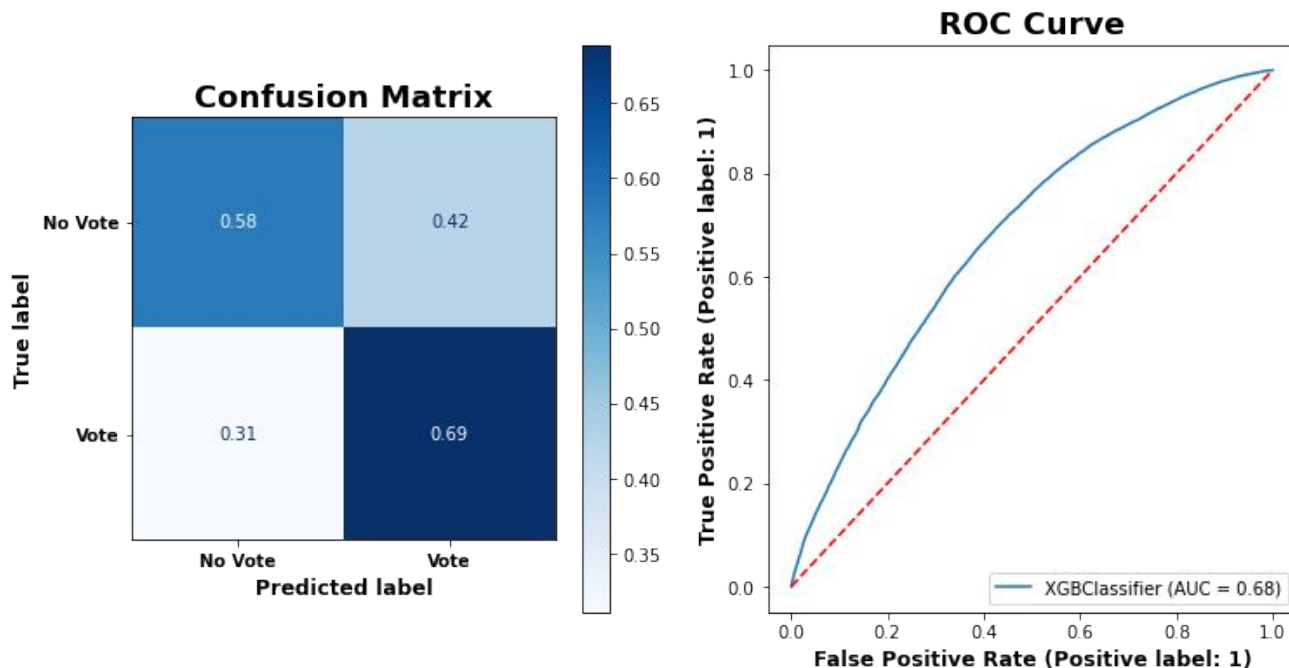
Questions?

Max Steele

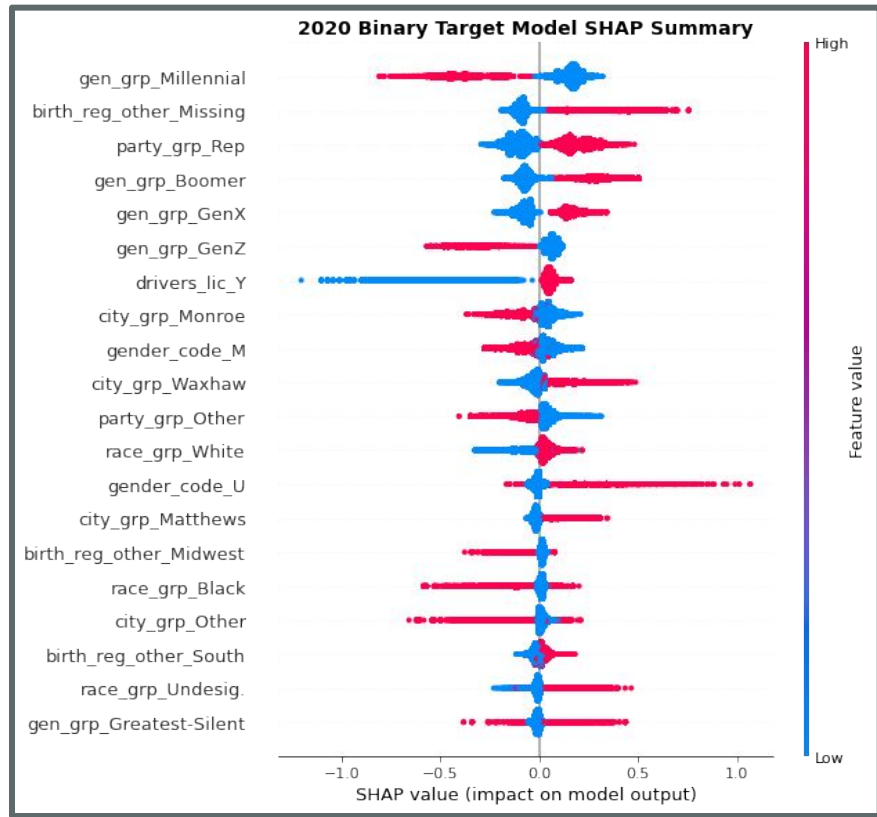
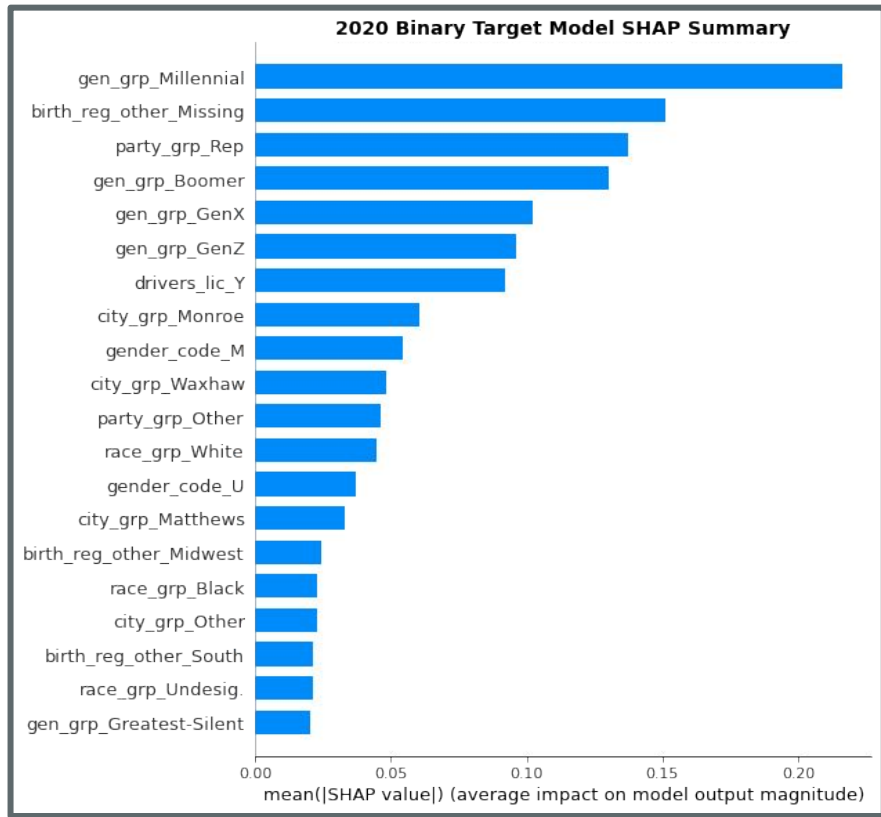
<https://github.com/zero731>

Appendix I - Best 2020 Model

- 66% accuracy

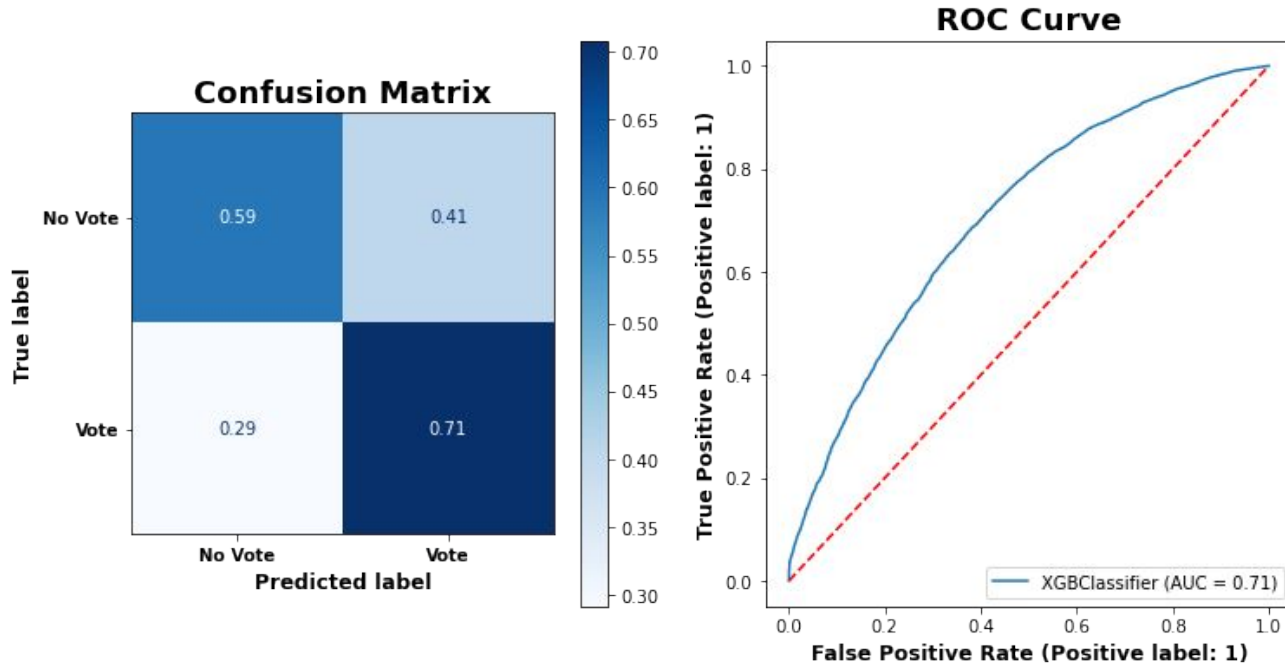


Appendix II - Best 2020 Model

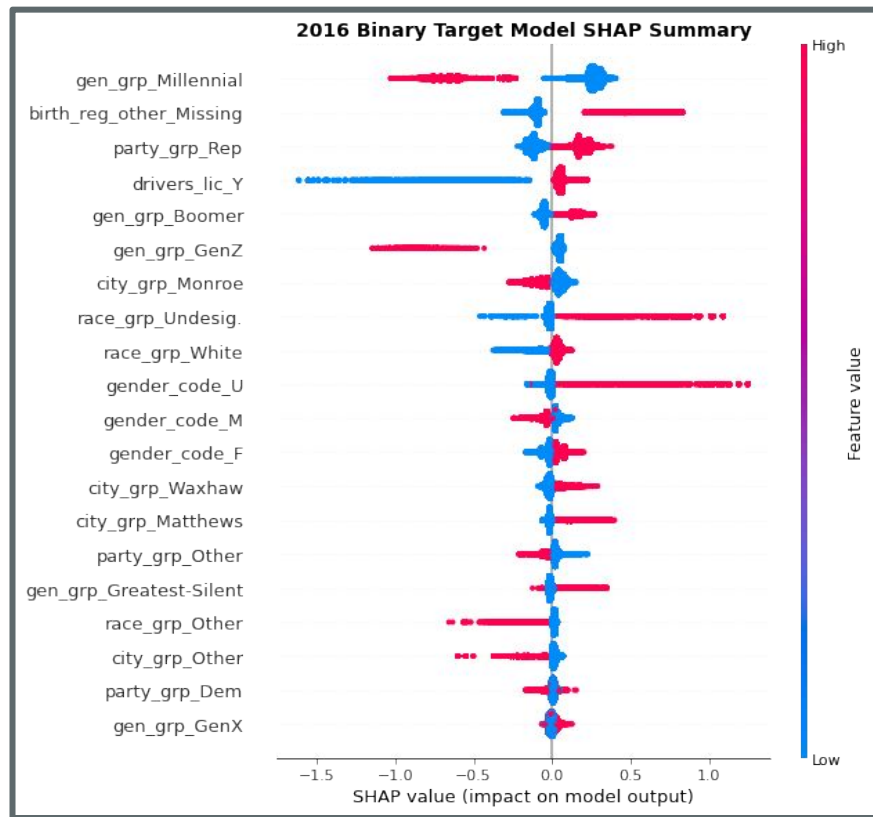
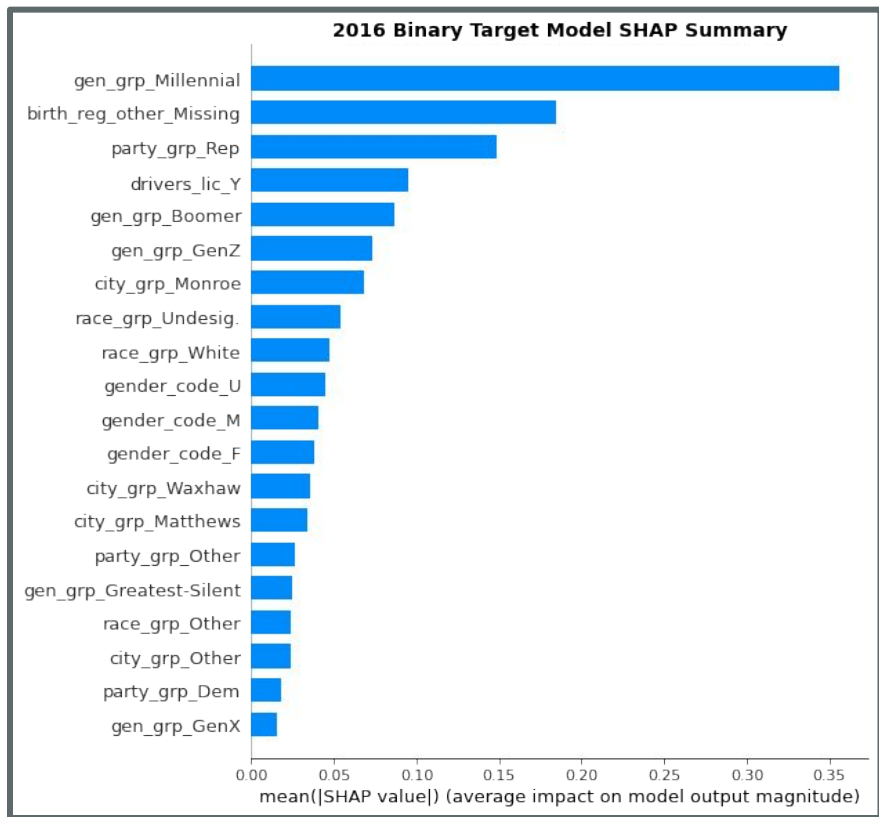


Appendix III - Best 2016 Model

- 69% accuracy

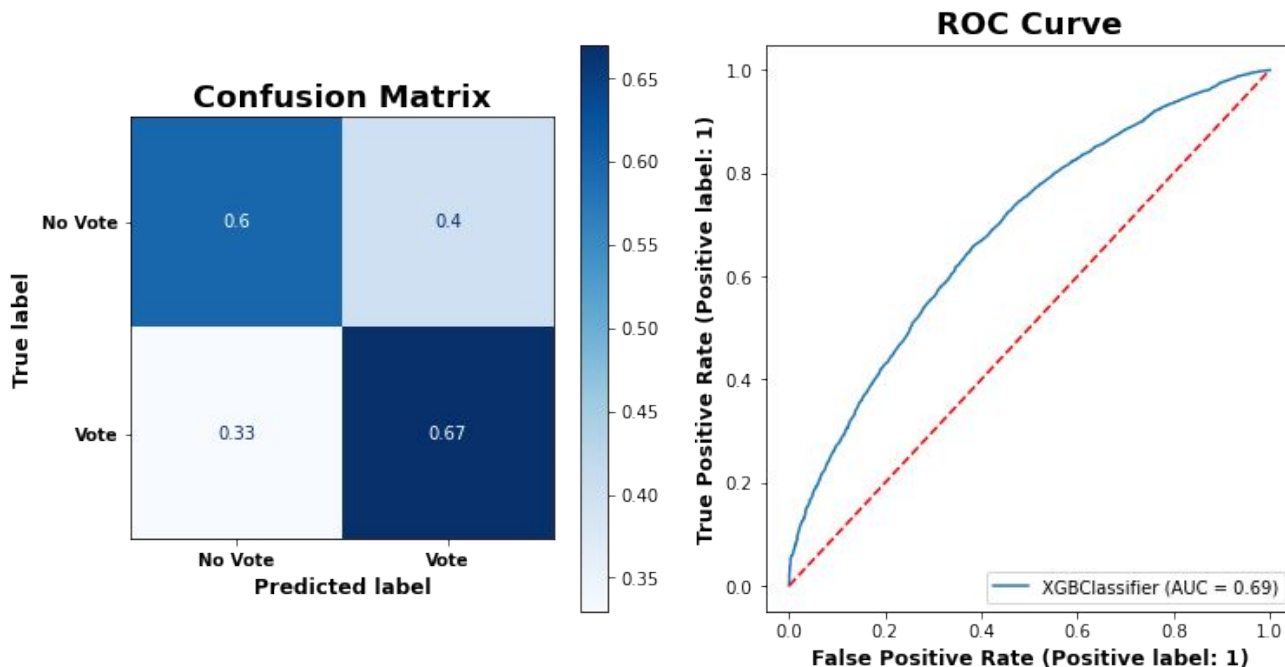


Appendix IV – Best 2016 Model



Appendix V – Best 2012 Model

- 66% accuracy



Appendix VI – Best 2012 Model

