

You can't vote them out if there's no one else to vote for.

The impact of local election competitiveness on voter turnout.



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**Does the presence of
competitive local elections
impact overall voter
turnout?**

How to Turn Out a Voter, according to science.

Research shows that the following characteristics have an impact on voter turnout:

- Gender
- Race
- Income
- Employment status
- Education level
- Age
- Presidential vs. Midterm vs. off-year election
- What party is in power
- Whether an incumbent is running or it's an open seat
- Party identification
- Competitiveness of Congressional elections

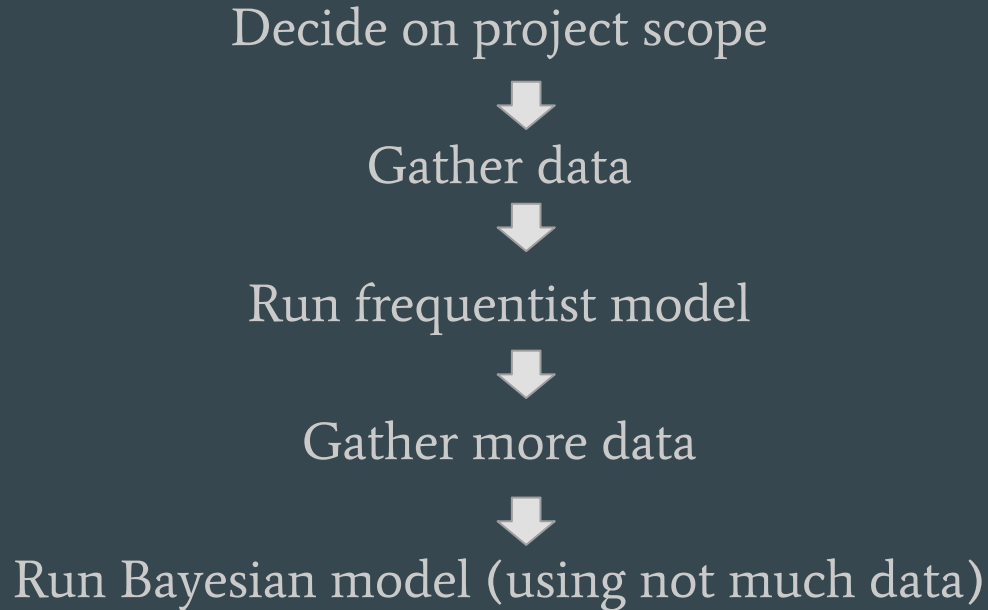
Uncontested Legislative Races Are Becoming More Common

Some say political parties are missing opportunities to boost their numbers. But others argue quality is more important than quantity.

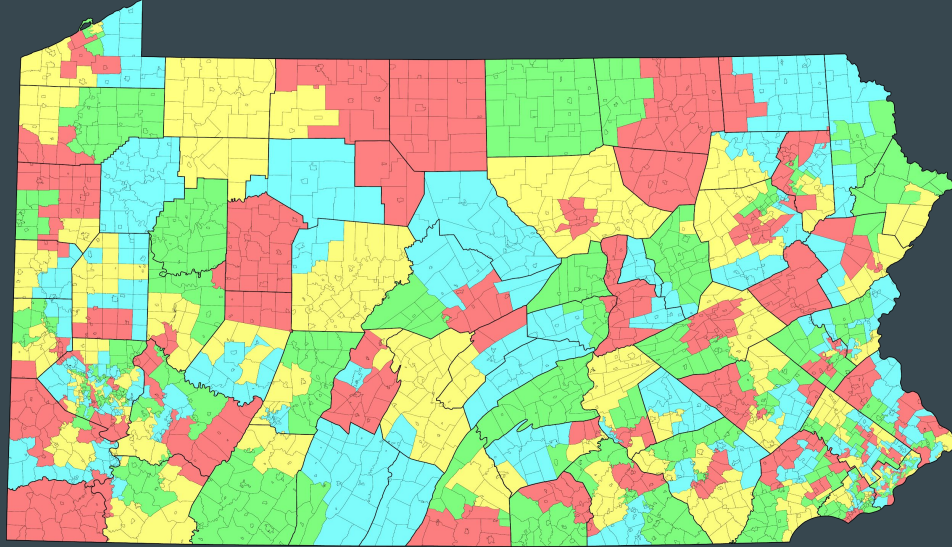
BY ALAN GREENBLATT | JUNE 2016

- Voter turnout in the US is abysmally low.
- Relatedly, faith in US governing institutions is at an all time low.
- In 2016, 45% of state legislative races were uncontested
- I wanted to test my personal belief that competitive local elections are good for the democratic process.

How to build a voter turnout model, according to me.



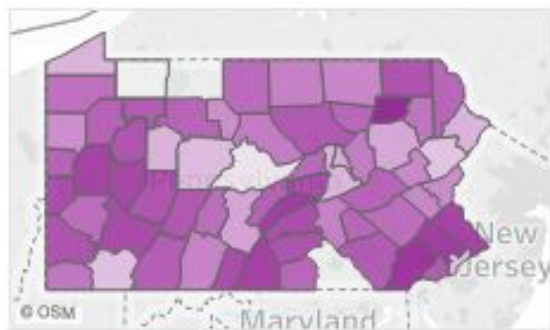
The Keystone State



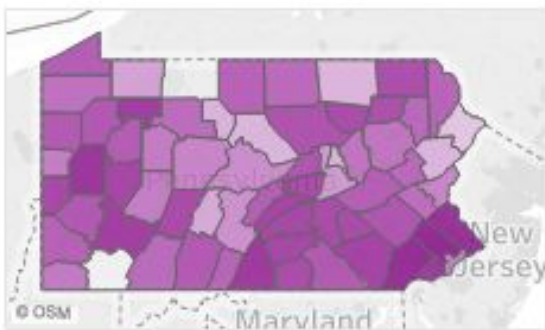
All municipal (county and local) elections are in odd years, while state legislative races are in even years- making it a well-controlled test.*

*with a frustrating drawback

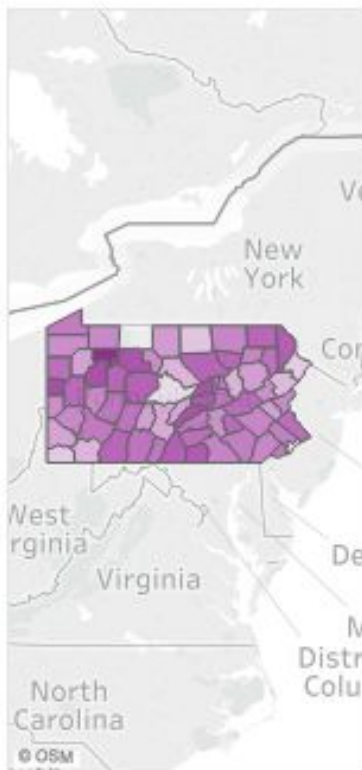
2016



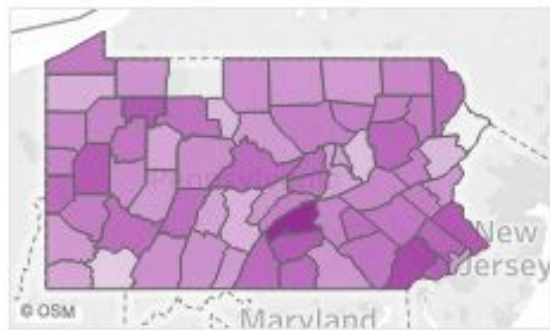
2012



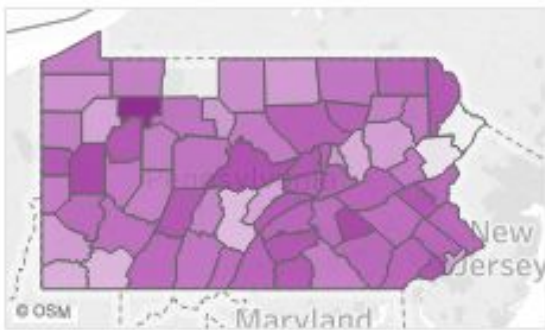
2000



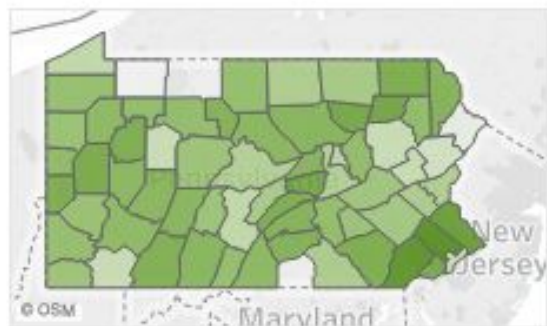
2008



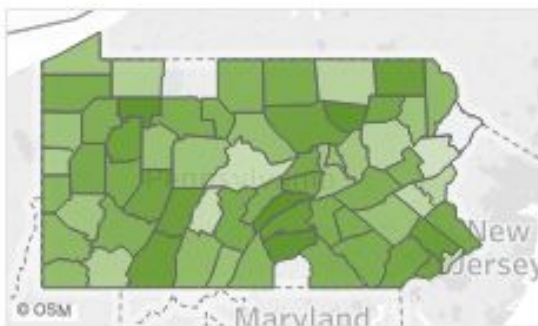
2004



2018



2014



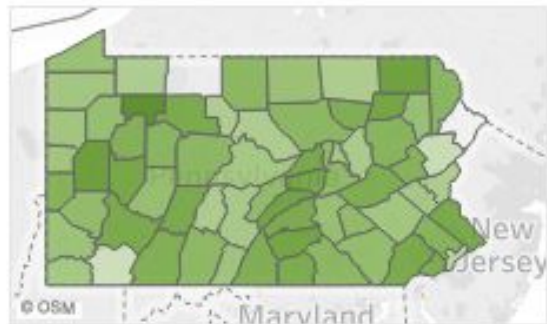
Avg. Turnout Percent



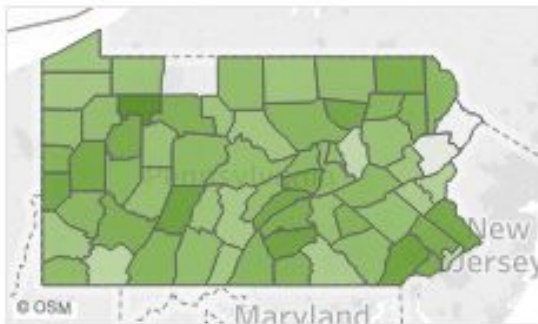
0.4797

0.6695

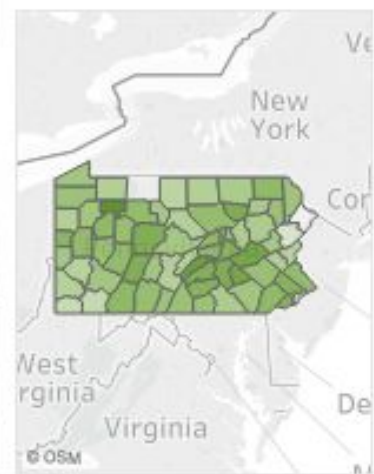
2010



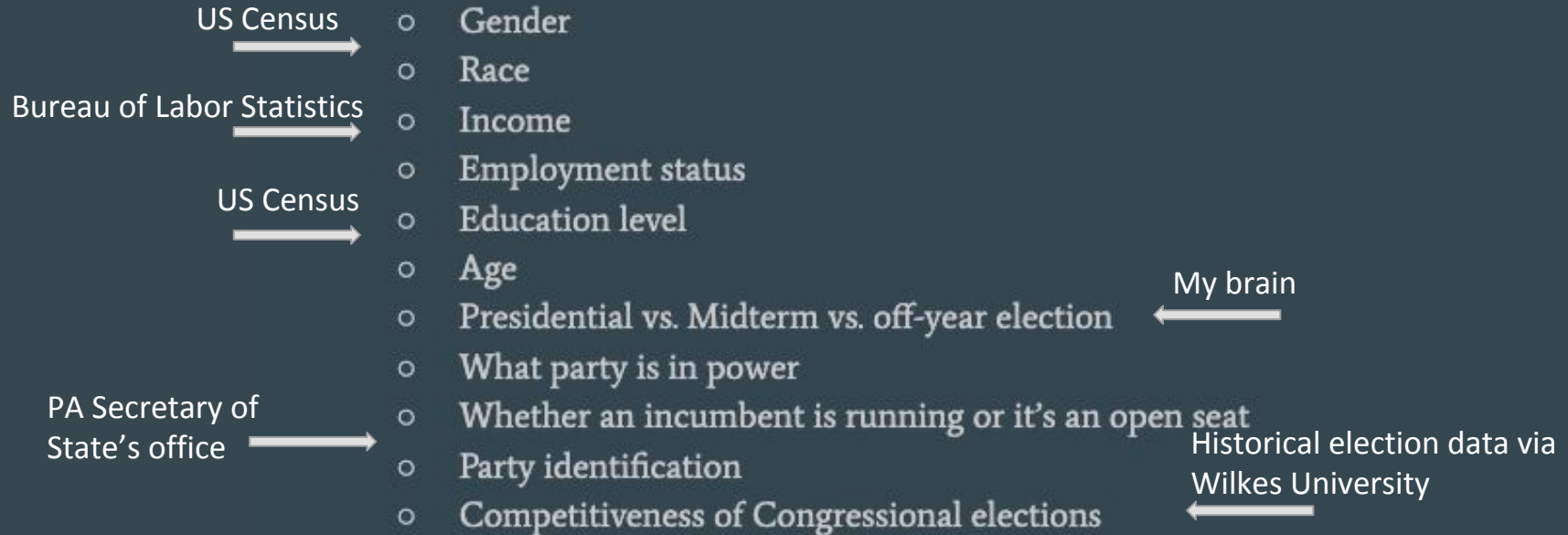
2006



2002



Love to gather data



Final Variables

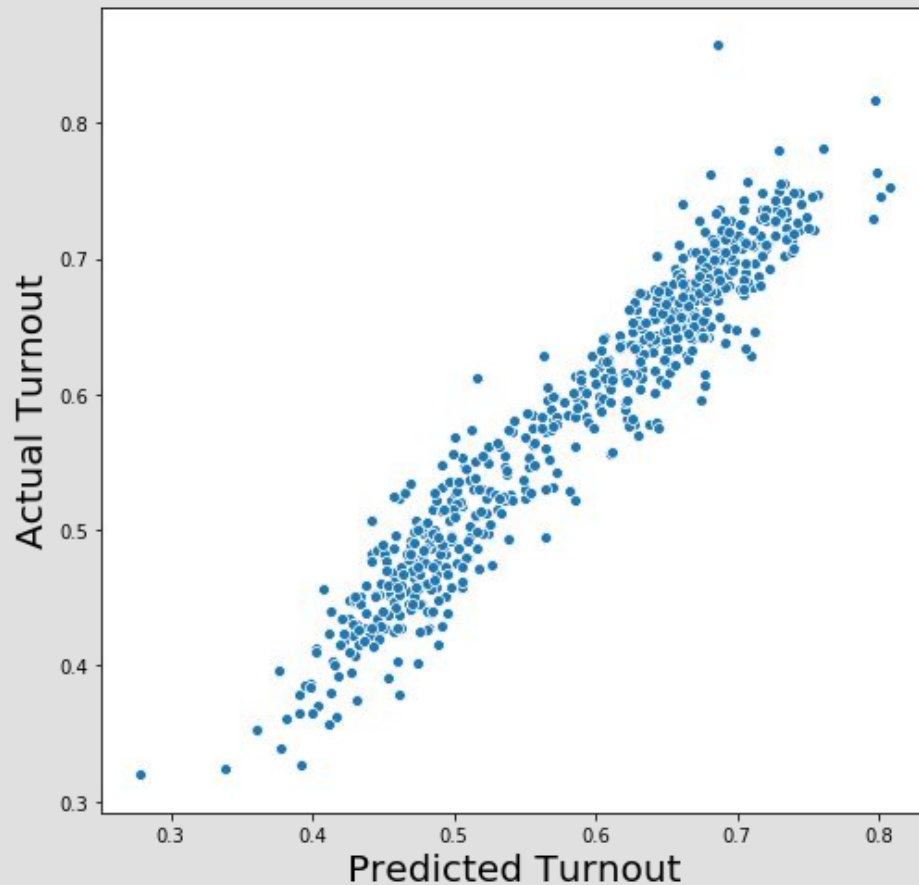
My most successful model included 24 variables, including:

- Demographic data (race, gender, age)
- Economic data (unemployment, poverty, median income, education)
- Historic voter turnout data
- Data accounting for the national political climate

Results

RMSE: 2.85%

Accuracy 92.9%



We could not accept the hypothesis.

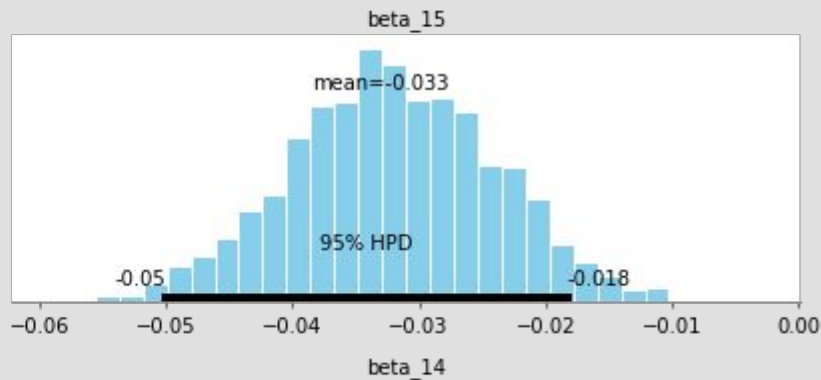
- Percent of elections contested was found to have a p-value of .19
- That is not significant!
- What was significant? The following had p-values of 0:
 - Prior turnout and national turnout
 - Whether it was a presidential year and whether the top of the ticket was an incumbent
 - Unemployment rate, education rate, median income
 - The percent of voters who were registered as Democrat or Republican
 - Age- the older your county, the more it voted. By like, a lot.

I

About Bayes

I was only able to run a bayesian model that accounted for 3 features, making it a highly inaccurate model. It did run with the variable I was testing for, which found that there was a negative coefficient attached to competitiveness.

But my evaluation metrics were abysmal, so take this all with a grain of salt.



Next Steps

- Improve Bayesian model
- Build a precinct-level model to improve accuracy
- Adjust and train this model on other states/outside of the safe controls of Pennsylvania

Questions?