

# Stat 139: Project Proposal Example, Fall 2016

## Group Members:

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## Project Title:

2016 Presidential Election: Did Unemployment Rate Matter?

## Hypotheses of Interest:

1. Determining whether there is an association between change in voting from 2012 to 2016 is associated with unemployment rate.
2. Whether this association holds up when controlling for other factors measured at the state level.

Variables of Interest (all measured at the state level  $n = 50$  or  $51$  depending on whether DC will be included):

**Response:** Voter gap in the 2016 election (Republican-Democrat)

### **Predictors:**

1. Voter gap in the 2012 election (Republican-Democrat)
2. Unemployment Rate in 2016
3. Median Income
4. % Rural
5. % Caucasian
6. % Hispanic
7. % Mormon
8. A binary indicating whether governor is Republican
9. Other predictors may also be included.

\*Note: variables will be gathered from wikipedia, state master, etc... and will ideally be measured as close to 2016 as possible

## Analysis Plan:

Several regression models will be considered and explored: a regression predicting 2016 voter gap from 2012 voted gap and unemployment rate, a model including all of these variables and other variables listed, and a best predictive model will be chosen (through cross-validation) to determine what factors are most associated with the 2016 election results. Many interaction terms will be considered (especially with the binary measuring governors' political party). Carefully chosen visuals will be included to support any important results found.