User Guide to Shiny App for Ecological Regression Racially Polarized Voting Analysis

This user guide will walk you through using the Ecological Inference App to estimate the level of racial vote polarization in a particular election. Before you start, you'll need to choose an election between two candidates to analyze. In order to demonstrate racially polarized voting, you will likely need to examine a number of elections in this manner.

Inputs: where to get them and how to format

1. First, create a new spreadsheet. Each row in the spreadsheet will correspond to an individual precinct, and each column will specify pieces of information to input about the precinct. The columns of your spreadsheet should be labeled with the following headers: precinct_ID, precinct_vote_total, percent_[candidate1], percent_[candidate2], percent_[minority]_voters.
2. Next, you will need to find the data to populate the sheet. The first column, precinct_ID, should list a unique identifier for each precinct. You should be able to find a list, depending on the race, through the office of your secretary of state or county clerk. Some offices make this information available online, while others may require phone calls or written requests. You will also need to look up or request a shapefile of precincts (a digitized map showing their boundaries) to complete step 4.
3. The next three columns—precinct_vote_total, percent_[candidate1], and percent_[candidate2]—require election results by precinct. precinct_vote_total should contain the total number of ballots cast at each precinct for the election you are examining. (Note that turnout for the precinct as a whole may be higher than turnout for a particular race. For instance, some voters who cast ballots for the state legislature may not specify any choice for the school board election.)
4. The final column, percent_[minority]_voters, is an estimate of the demographics of each precinct. Although the Census collects detailed information about race by location, that information does not generally map cleanly onto voting precincts. You should be

Formatting: Placing The Data With Its Respective Column

1. After either the state registrar or the state secretary gives you the pdf of the data, you manually enter the data with its respective column. The process of manually entering each data point can be tedious and if you are not careful can lead to some mistakes. Check over your input multiple times to make sure the correct numbers align with their respective column and precinct.
2. It is then necessary to save your excel document as a Comma Separated Value(CSV) file so it can be uploaded to Shiny App.

- Using the App:

1. On the Shiny App, upload the CSV file by clicking "Browse…" and finding the file.

2. Under “Candidate 1 data” select the percent_[candidate1]
3. Under “Name of candidate 1” write their name
4. Under “Candidate 2 data” select the percent_[candidate2]
5. Under “Name of candidate 2” write their name
6. Under “Racial demographic variable” select the demographic variable that you want to compare between candidate 1 and candidate 2
7. Under “Name of minority race” write the name of the minority race that is being compared
8. Under “Total votes cast” select your precinct_vote_total
9. to the Select the relevant columns from your dataset and input category names

- Output:

    - Where to find this data
        - Census demographic data
        - Census population data
        - Shapefile, match
            - Census data is reported by precinct, election data is reported by census tract. You need to layer them on each other
        - Election results by precinct --call State Secretary
    - Formatting
        - Choose which column corresponds to which candidate etc. and name the axis
        - Csv values between 0 and 1 for percentages
        - Precinct id are unique but dont matter what they are
- Using the app
- Output:
    - (text wrappers for pdf output to make it more interpretable)
- Direct to Expert report template