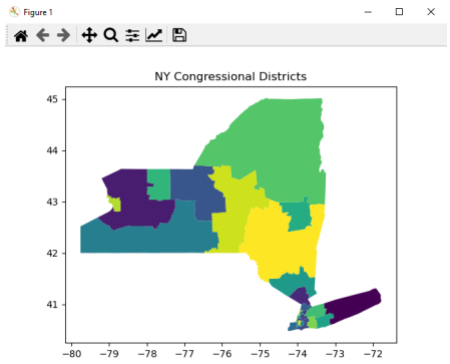
ISE/POL 369

Spring 2023
Assignment 2

Assignment background

Political information displays often combine geographic data (e.g., congressional district boundaries on a map) with other data for each of the geographic regions. These displays require that you combine data from multiple data sources and display the data in a way that combines the data sources.

Part a) Your assignment is to create a display for your assigned state (any state other than New York) that displays the congressional districts in the state and fills each district with a color that is related to the amount of 2021-2022 campaign contributions for that district. An example of such a display is shown below, but for random district colors.



The displayed color should be related to the total campaign contributions for the district, including contributions for all candidates, primaries and regular campaigns, and contributions from all sources. You should assign colors for a district using a graduated color scale. One possible approach is to assign colors based on whether the contributions for the district are above or below the median campaign contributions for districts in the state. For each category above or below median), you could use a different primary color, but change the intensity of the color based on the amount above or below the median.

Part b) Create a display for your state that shows the winning party and margin of victory for each of the congressional districts in your state. Districts won by a Democrat are shown in blue and districts won by a Republican are shown in red. Vary the saturation of the color based on the margin of victory. Use increments of 1) less than 5% margin of victory, 2) 5%-10% margin of victory, and 3) more than 10% margin of victory. If you are not familiar with color saturation, you will find that the article in Hint 2 is a quick productive read.

Hints

1. To learn how to color the districts, read information on chloropleth plotting of a GeoDataFrame. One source that might be helpful can be found at https://geopandas.org/en/stable/docs/user_guide/mapping.html.
2. HSB Explained https://www.learnui.design/blog/the-hsb-color-system-practicioners-primer.html

Assignment due

- Assigned: March 12
- Due: March 22
- Submission: Please submit your .py file code to the course's shared Google Drive folder. You must be signed in to your stonybrook.edu email account to access the link. Ensure your full name is at the top of your assignment.