DA 6233 Fall 2023
Homework 4

This homework has five graphs: https://public.tableau.com/views/Homework4-TableauPro/ElectionMap?:language=en-US&:display_count=n&:origin=viz_share_link

Try to recreate them as closely as possible. You can use a different color scheme, as it may be difficult to match colors precisely without hex codes. Each plot carries 3 points. *I will post the submission instructions on BB separately, along with a video.*

I am sharing the raw data in the adjoining CSV file. I have also added the R code, which I used to download, clean up, and merge two CSV files with election results for 2016 and 2020.

The code and **variable description** are in the PDF file. The data is at the county level, and its structure differs from the data set we used in the class. **As such, please understand the data before you begin**.

I have used a global filter for all the plots to exclude Alaska and Hawaii (sorry!)

Plot 1: This plot uses a map facet and separately plots the percentage vote for GOP in 2016 and 2020 on two maps. I find this plot fascinating because, to untrained eyes, the facets look identical. It makes you appreciate how only a handful of counties decide US election results.

Plot 2: This plot has two maps again in facets, but now they are positioned next to each other. The maps show the Dem votes in 2016 and 2020 as bubbles. The background for the map can be changed by selecting map> Background Maps from the top toolbar (Look really high to locate it!)

Plot 3: This plot compares the percentage change in votes for GOP (X-axis) and Dem (Y-axis) only in Georgia and Arizona. You know why I picked these states! The story for Georgia is relatively straightforward, where many more Democrat voters voted in 2020 compared to 2016. The story for Arizona is not so clear-cut, so I added the total votes to the tooltip. This allows you to put things in perspective.

Plot 4: This simple map compares vote differences between Dem and GOP in 2016 and 2020. You will have to create two new variables for this plot to measure vote differences.

Plot 5: I mapped Biden's percent votes to color in this treemap. Note that the variable that already exists in the data will not give you the correct result because you can't aggregate it as the state level correctly. You will have to create a new variable for this.

Finally, in many tooltips, you will notice fractions showing up as percentages. This can be easily achieved by changing the "format" of the underlying variable. If you click the white arrow on any variable pill, it will show you a "Format" option. Explore this to learn new tricks!