# DA 6233 Fall 2021
# 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 exactly 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 variable description is in the Rmd file. The data is at county level and its structure differs from the data set we used in the class. As such, please understand the data before you begin.

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

Plot 1: This plot uses a map facet and plots percentage vote for GOP in 2016 and 2020 separately on two maps. I find it fascinating because for untrained eye they look identical. It makes you appreciate how US election results are actually decided by only a handful of counties.

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 quite clear. Many more Democrat voters votes in 2020 compared to in 2016. The story for Arizona is not so clear cut. So I added the total votes to 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. To create this plot, you will have to create two new variables to measure vote differences.

Plot 5: This is a tree map, which we did not learn in the class. It's very easy to make: https://help.tableau.com/current/pro/desktop/en-us/buildexamples_treemap.htm

In this map, I mapped Biden's percent votes to color. Note that the variable that already exists in the data will not give you 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 on the white arrow on any variable pill, it will show you a "Format" option. Explore this to learn new tricks!