ECONOMICS 691 – GROVES – FALL 2021
HOMEWORK ASSIGNMENT #2

Northern Illinois University

For this assignment you will write the code necessary to complete each step and commit and push it to your GitHub repository which you have previously shared with me. Your grade will be based on the cleanliness of the code and whether it produces what is expected. On Blackboard you have each been assigned five states from the United States and you will use these states to complete this assignment.

PART 1:

- Scrape the 2016 Presidential Election Result data from the N.Y. Times' website we used in class for each of the states assigned to you and produce a SINGLE dataframe called VOTES which contains only the following items: county name, state name, total votes for Trump, total votes for Clinton, percentage of votes for Trump, and percentage of votes for Clinton.

PART 2:

- Use the Census API to download the county level statistics from 2016 that we did in class and create a SINGLE dataframe named CENSUS.1 with all the county level values as percentages (as we did in class), the county name, the geometry, and the state to which the county belongs.

- Use the Census API to download the county level statistics, just as you did before, and create a SINGLE dataframe named CENSUS.2 with the same objects as in CENSUS.1 above, only from the year 2019.

- Using a function of your own design, find the percentage change in each county for each of the census variables created (the percentages) between 2016 and 2019 and then create a dataframe with ONLY the percentage changes values, county and state names, and geometry called CENSUS.3

PART 3:

- Using *ggplot2*, generate a map of percentage of votes for Clinton and a map with the percentage change in the percent of the population that is White and assign these to the objects map1 and map2. The maps must contain a legend and NOT have the latitude and longitude measures shown and they must be in color.

- Using the *cowplot* package, produce a map that contains both map1 and map2.