Oxford Project

Title: Did COVID-19 Defeat Donald Trump? An Electoral Analysis for the 2020 US Election

Research Question: Has Donald Trump's handling of the COVID-19 crisis affected his voting results in the 2020 US presidential election?

The entire project was completed on Jupyter Notebook using Python. It is divided into three parts/ projects, progressively analyzing whether Trump's loss in the 2020 election was related to COVID-19 and, if so, to what extent. The data mainly comes from Kaggle, the US Census Website, and the US ACS. So overall, it is not a professional paper as there are three sub-projects. That was the course schedule for that course.

Project One:
1. Main tasks is EDA including Data Cleaning, Summary Statistics Table, and Plots.
2. The data used for this part is from Kaggle.
3. The plots here mainly provide basic descriptions of essential variables in the data.

Project Two:
1. The main tasks are The Message, Maps, and Interpretations.
2. The data sources are primarily Kaggle and the US Census Website.
3. "The Message" represents a primary hypothesis about the research question based on Project One. Additional graphs are drawn to support this viewpoint.
4. Maps are primarily based on data from the US Census Website, with maps drawn at the US county level.

Project Three:
1. Main tasks include Merging Data, OLS regression, and Machine Learning.
2. Merging data involves combining all the data from the first two projects with data from the US ACS.
3. OLS regression is used to find the best model to predict the change in Trump's support from 2016 to 2020. A total of 35 models were created to find the best one.
4. Machine Learning involves implementing ML methods: Regression Tree, Random Forest, Cross-Validation, etc.

This project only found that the voting patterns for Trump in the 2020 Election were affected by COVID. However, there were NO conclusions about the causal effect between COVID and Trump's loss.