

Peer Review #46

Score: 4

Rationale of score: They have done many works and got some intriguing results/figures that show the current COVID-19 situation in the US. They also present some interesting findings, i.e., the confirmed cases in each state with respect to their political standings (Republican/ Democrats). More work about modeling their data is left to be done.

Summary of the report:

In this report, the team investigated the relationship between the spread of COVID-19 and ambient temperature. Their research question consists of three parts: first, they want to know whether there are any patterns between weather and COVID-19 cases. Secondly, they plan to look into how a region's political standing would affect its pandemic's severity. At last, they would like to build a model out of the previous observations for suggesting future controlling strategies.

After filtering out the US climate data, they produce some scatter plots between the mortality rate of COVID-19 and average temperature. They found conflicting results from different states, and therefore concluded that there are no direct relationships between the transmission of the disease and weather. In their study of political standings and the pandemic, they found that Republican States seem to have more cases than Democratic States after August.

3 Strong points:

1. Great report format. Each section contains enough information and is well organized.
2. They considered many factors (i.e. temperature, political standings etc.) which could influence the COVID-19 and conducted plenty of analysis.
3. Many figures were included and presented clearly in this report.

3 Weak points:

1. Some references of the COVID-19 stats are missing (i.e., the number of US confirmed and death cases of COVID-19)
2. No model (relationship) between temperature and covid-19 cases is founded in current work.
3. Discussions about how to model the relationship between temperature and COVID-19 cases (i.e., linear regression, logistic regression and etc.) has not been clarified yet.

Detailed feedback:

They completed a thoughtful and informative report regarding many factors influencing the spreading of COVID-19. The methods were explained clearly and the figures they presented are straightforward and helpful for people to understand. Some findings about COVID-19 cases and political standings are interesting. However, a model between temperature and covid-19 cases is missing and more work needs to be done. Besides, more references are needed to make solid statements in the introduction section. I would also suggest this team to reflect more onto the causal inference between mortality rates and average temperature - as mortality rate may not directly reflect the transmission/severity of the pandemic in certain regions.