***Team Members (Group Four):***  *James Niu (Repo Owner), Elsa Hernadez, Ethan Kaufman, Steven Broyles, Babatunde Adefokun*

***GitLab Collaboration:***[*https://github.com/jameswniu/project.git*](https://github.com/jameswniu/project.git)

A Data-Driven Analysis on Efficacy of Mask Mandates in the United States

1. **Introduction:**

Because Covid-19 is all inclusive in affecting the way we live and how we live after, we aim to explore public data to solidify or critically analyze claims that our surroundings feed to us. Based on official data collected by the Centers for Disease Control and Prevention (“CDC”), we would utilize mask mandate as a factor to capture its effect on individual or public health, and to quantify economic, social, and political impacts descriptively and comparatively.

1. **Dataset:**

The dataset by the CDC spans nine months from April 10, 2020 through January 10, 2021 by country by day. Each row represents an individual country for a State on that particular day with Boolean on whether face masks are required in public places. Requirements for face masks have all-encompassing sources and can include executive orders, administrative orders, resolutions, and proclamations.

1. **Data Preparation:**

This dataset has 1,594,118 records that is large enough to exceed Excel’s limit (one million records), so we use a simple editor such as Notepad++ to open it.

We first pick out relevant variables only that we can use to describe and analyze such as the State, country, date, and Boolean on whether mask mandate was in effect on that day. We left out other variables such as State and County FIPS codes and URLs to executive orders.

The dataset is grouped by State by County by Month that leaves us with approximately 53,000 records. This data is usable to take into account the timeframe and time lags when considering its healthcare, economic, social, political impacts.

The second usable dataset is grouped by State by County summing days with mask mandate for entire period. This leaves us with approximately 5,900 records. This data is useful for descriptive purposes to summarize and compare if States with more mask mandate days end up better after all.

1. **Research Questions:**

James will prepare the data into the two meaningful sets. The group will split up to do the analysis into diverse but overlapping topics. Based on the data each member is going to find for the right-hand side, he or she will merge records and construct descriptive visuals or correlation analysis. This allows each member to delve deeper into his/her topic of interest, facilitates allocation of individual focus in line with GitLab branches and subsequent time management for collaboration.

**Plausible Topics of Interest:**

James: Impact of mask mandates on unemployment - does it facilitate or push people away from work?

Impact of mask mandates on federal payouts - does it incentives more payout from the government?

Elsa: [x]

Ethan: [x]

Steven: [x]

Babatunde: [x]