CS6220 Final Project Proposal

Group members:

Miranda Adkins, Allison Bieber, Nicholas Galinski, Nicholas Vann, Ziqi Xu

Dataset:

https://www.kaggle.com/roche-data-science-coalition/uncover

Over the past few months, people around the world have been affected by the global COVID-19 pandemic in a variety of ways. While some have been affected directly due to personal illness from the virus, many others have been touched indirectly by the effects of virus-prevention measures on everyday life. From restaurant closures to travel restrictions, these changes have caused profound shifts in peoples' ways of life across the globe. Our project will examine the ways in which COVID-19 infection rates may have caused and been affected by lifestyle change-related measures on an international scale.

To tackle this project, we will be using the Roche Data Science Coalition's UNCOVER COVID-19 Challenge dataset (available on Kaggle; see link above). The RDSC is a Canadian-based organization which seeks "to bring actionable COVID-19 intelligence to patients, frontline healthcare providers, institutions, supply chains, and government" (Roche Canada Website, 2020), run through the Roche multinational corporation. The UNCOVER dataset is actually "a curated collection of over 200 publicly available COVID-19 related datasets from sources like Johns Hopkins, the WHO, the World Bank, the New York Times, and many others" (Kaggle, 2020). It includes general information on infection/spread rates of the virus (on both international and national scales), as well as datasets related to lifestyle changes over the course of the pandemic, such as restaurant closures, airport closures and limitations, and smartphone-based mobility tracking. We plan to use a combination of these datasets to analyze relationships between lifestyle change mandates and statistics such as infection and recovery rates. Our final deliverables will be a research paper, associated data visualizations (either integrated into the paper structure or in a separate file), and a Jupyter notebook containing the code used to analyze our data.

Life has changed in so many ways since the beginning of the COVID-19 pandemic. We hope that this project will show us that the major lifestyle adjustments that people around the world have made have been effective in slowing the spread of the coronavirus and making the world a safer place.