

Group 1

SSC 442: Project Outline

18 February 2020

Chasing the Coronavirus

Data Collection Plan:

Current data regarding 2019 novel coronavirus (2019-nCov cases) was made available by John Hopkins University on [an online dashboard](#) that is frequently updated with new cases. Data from that dashboard was downloaded in .csv format from the following [linked website](#).

Analysis Plan:

We plan to analyze the data above by pursuing the following questions: What are the main locations of case confirmations? How many recoveries and deaths when compared to confirmations? What and where has been the increase in confirmed cases over time? How does disease spread? What is the probability of it spreading to the U.S., given current measures? The following steps will outline our plan to answer.

1. What are the main locations of case confirmations?
 - a. When analyzing the location of the virus confirmations, we can use gapminder or use the map library to show the different locations where the virus is prominent.
2. How many recoveries and deaths when compared to confirmations?
 - a. For this data visualization, we can use the map library to geographically display the amount of deaths, recoveries, and latent cases per location (country and province) through circles of varying sizes.
3. How does disease spread? What and where has been the increase in confirmed cases over time? What is the probability of it spreading to the U.S., given current measures?
 - a. To analyze the amount of confirmed cases over time, we're going to create a slider tool that will begin on the date of the first confirmed case and end with the most recent update to our data.

- b. As well, predict the probability of an epidemic in the United States by performing compartmental models (a combination of if/then and loop statements).
 - i. The compartmental models will include four groups (untouched, latent, dead, and recovered) and be linked by foreign travel patterns, domestic/foreign interactions, and policy established by the United States (specifically, Customs & Border Protection) to prevent the spread of the coronavirus.