

Capstone Project

Coronavirus: The New Challenge

Introduction

The year 2020 was expected to bring in some new hope for the world. The ongoing global slowdown, fueled by many issues such as US-China trade war, Iran-US conflicts had made huge impact on the global economy. Everybody hoped for positive developments. However, two months onwards, we have a challenge from an unexpected corner. The Coronavirus (CoV), that outbreaked in China initially, has become a threat for the whole world. According to the latest updates, more than one hundred thousand people have been infected by CoV throughout the world¹, across 108 countries and there have already been 3,825 deaths reported.²

The severity of the CoV infection arises because it can be transmitted through human contacts and through sneeze of infected people. Human movement in crowded places are an absolute problem in this case. Malls, fairs, airports, railway stations, busy markets have the potential to spread this disease. Another problem is that its symptoms are similar to fever and influenza, if not controlled it can cause serious situations like pneumonia and other diseases leading to death. So far there has been no medicines or vaccine available for this viral infection. The only preventive measures are hand wash, covering mouth, etc,³

This capstone project is an attempt to look at various trends of spread of the virus across the globe and to look at various patterns of infection and recovery. This project includes data analysis of time series data on infection, recovery, and death cases. The objectives of this project are:

- To understand the trend of change in infection, recovery and death due to CoV
- To identify the clusters (locations) in which the virus has spread
- To understand the recovery efforts and their effectiveness

Data Description and Sources

Data on CoV infection, recovery, and death are available day-wise till 20 Feb 2020. Data are available on the following attributes:

- Date

¹ <https://www.who.int/news-room/detail/07-03-2020-who-statement-on-cases-of-covid-19-surpassing-100-000>

² <https://coronavirus.jhu.edu/map>

³ <https://www.who.int/health-topics/coronavirus>

- Location (including latitude and longitude)
- Country
- Confirmed cases of infection, recovery, and death data from 22 January to 20 February 2020

Data has been downloaded from Kaggle website (<https://www.kaggle.com/sudalairajkumar/novel-corona-virus-2019-dataset>).