Visualizing COVID-19 Data

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1 Introduction

Corona Virus Disease (COVID-19) is a transmittable virus originated from Wuhan, China and spread out globally, which cause pandemic and affected the 2020 lifestyle of everyone. The virus is transmitted through droplets, which most governments require citizens to wear face masks and practice social distancing, which is at least 6 feet apart. The first reported patient with COVID-19 was on the 31st of December 2019 in Wuhan, China. The vaccine was released at some time prior to this writing, but new COVID-19 variant started appearing in the UK, which is very possible to say that the research for vaccines for COVID-19 will take years especially dealing with new variants.

This practice project will visualize the COVID-19 data from humdata.org from January 22, 2020 to January 14, 2021 using Pandas and Matplotlib libraries in Python to analyze which countries still need more effort to reduce the spread of the virus until the lifestyle becomes normal worldwide.

2 New Cases

The new cases are determined by calculating the difference between the current day and the day before for each day in each country.

2.1 Growth Rate

The growth rate is determined by dividing the current day by the day before for each day in each country.

2.2 Active Cases

The active cases are determined by isolating the number of deaths and the number of recovered patients from the confirmed patients.

2.3 Overall Growth Rate

The over growth rate is determined by calculating the difference of active cases from the current day and the day before, divide the difference by the day before.

2.4 Death Rate

The death rate is calculated by dividing the deaths by the confirmed cases each day.

2.5 Hospitalization

The number of hospitalization needed is determined by calculating the number of COVID-19 patients in need of hospitals to recover based on the hospitalization rate and the active cases per day.

2.6 Visualization of the Data

The data needed of visualization is possible by using the Mathplotlib. The bar and line graphs can be customized and can modify the range of data to present.

3 Future Work

Add more data visualizations for number of recovered patients in each country and how each country perform as a community to prevent the spread of the virus.