Covid-19 Global Vaccination Report

Introduction

It has been 2 unusual years for people living under Covid-19 pandemic. Vaccination has been examined and produced in patches in 2021. This report will consider the vaccination(s) performance of different countries from various brands after the international vaccination coverage. In order to provide a cross comparison on Covid-19 pandemic data and vaccination status, data are collected from 2 different resources, World Health Organization (url: <https://www.who.int/>) and Our World In Data (url: <https://ourworldindata.org/>). For geographic map, the shape files are carried from World Map of Harvard College (url: <http://worldmap.harvard.edu/data/geonode:country_centroids_az8> ) provide the geometric point (latitude and longitude)of countries’ centroid and other attributes related, such as ISO alpha-3 (known as 3-digit country code).

Data Exploration

Data set identified and cleaned.

The datasets for the project have been extracted from various public sources.

|  |  |  |  |
| --- | --- | --- | --- |
| Source | File Name | Observations Counts | Missing Values Percentage (Vaccination related) |
| OWID (Our World in Data) | vaccinations.csv | 16545 | * Location: 0 * Date: 0 * Total\_vaccinations: 37.8% * People\_vaccinated: 41.8% |
|  | owid-covid-data.csv | 84097 | * Location: 0 * Date: 0 * Total\_cases: 2.4% * New\_cases: 2.4% * Total\_vaccinations: 89% * People\_vaccinated: 90% * Population: 0.64 * Gdp\_per\_capita: 9.5% * Human\_development\_index: 8.9% |
| WHO (World Health Organisation) | vaccination-data.csv | 212 | * Country: 0 * Total\_vaccinations: 0.5% * Persons\_vaccinated\_1plus \_dose: 12.7% * Vaccines\_used: 16% |
| OxCGRT (Oxford Coronavirus Government Response Tracker) | covid-vaccination-policy.csv | 88345 | * Entity: 0 * Day: 0 * Vaccination\_policy: 0 |
| YouGov (The Imperial College London YouGov Covid-19 Behaviour Tracker Data Hub) | covid-vaccine-willingness.csv | 83 | * Entity: 0 * Day: 0 * Willingness\_covid\_ vaccinate\_this\_week: 0 |

Data sets from OWID and WHO are firstly merged together by location name and published date. Then, we acquire features from this optimised format source, including country name, date, number for daily and total vaccines administrated, Human Development Index (HDI) values and population, etc. It is noted that observations related to the number of total vaccines with missing values in OWID datasets have been first filled up with the data from WHO. If both data sources have not recorded this, we then filled it up with zero.

Data sets for vaccination policy and willingness are separately analysed. Although there is only available for a select number of countries which report these two-necessary datasets,

Individual reflection

what had happened to now

The team have already decided which domain we are going to focus on making analysis which is the Covid 19 Vaccinations. My main job in this program has three part:

1. Github Repository Administration

2. Python Code Programming and Reviews

3. Report Written

what plan to do next

For the next stages of this project, we have planed in the structure following:

1. Focusing on

2. Making more intuitive and less complex visualisations to support our research questions and informative ideas to share with our stakeholders

3. Acquiring more reports, news, policies and researches through various channels to make the program in-depth, esp. we hope to provide a more broaden view for the universe to have a clear awareness the current situation of the Covid pandemic.