Coronavirus (COVID-19) Vaccinations

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1. INTRODUCTION

COVID-19 is the ongoing Pandemic declared by WHO so far, every country has suffered from this Pandemic, millions has already affected and hundreds of thousands of people already died. To battle with this Pandemic vaccination is the only hope, multiple companies has invented various vaccines to fight with this Pandemic. Vaccinations is the ongoing process in world wide at very large scale. In this flyer we have used multiple datasets regarding COVID-19, total deaths, daily vaccinations and total vaccinations.

2. DATASETS

In this project assignment we have used three datasets from two different sources named as vaccination, vaccination by manufacturer [1], Our world in data's COVID dataset [2] and total number of vaccination dataset [1].

3. Features of Dataset

In this section we will discuss about the features from dataset that we have used for our visualization.

3.1 Vaccinations by Manufacturer

In this dataset there are five different manufacturer providing the vaccinations, Pfizer/BioNTech, Moderna are the leading vaccine manufacturer having 55.4% and 35.8% share respectively. In this dataset we are only provided with the limited number of countries.

3.2 Our World in data Covid-19

In this dataset mainly focused on the country, Continent and total number of deaths are happening because of COVID-19. We have done the visualization as per continent wise, as per the graph North America has more number of deaths.

3.3 Vaccinations

In this dataset we have used vaccinations data set from GitHub. This is the main dataset we have used for to know more about the daily vaccinations. Here most of the features we have used as daily vaccination and daily vaccination per million, sum of raw vaccinations, total number of vaccinations.

4. Visualization

In this section we will explain about the different type visualization methods to represent our three datasets.

Firstly, we have taken the dataset per manufacturer wise, as we can see that there are five major vaccinations manufacturer, this dataset has provided the vaccinations for few countries. If we see the first figure, we can understand that most of the people used Pfizer/BioNTech which has 55.4% vaccinations done, after that we have Moderna it has 35.8% of vaccinations done. The remaining vaccinations are having less percentages compared to Pfizer and Moderna.

So, each continent has different countries details when we go inside the graphs. After that we have used Bar chart to show the total vaccinations done by continent. By seeing the graph Asia continent has done a greater number of vaccinations done for coronavirus.

In this figure 2 we have one more drilled down chart where it has the information about the sum of the vaccination's raw percentage, sum of daily vaccinations, sum of day vaccinations per million and finally total number vaccinations happening as per the continent.

Here we have used bubble chart to display the country wise vaccinations are done, semicircle chart represents the continent wise deaths happened due to COVID-19. In the semicircle internally we used one more graph to represent by country wise data which has more death count that graph done using line graph.

After that next continent is North America who has done most vaccinations after Asia which is in second place. Then Europe has done many of it, in the last position we have Africa where we have very a smaller number of vaccinations happened.

In this figure 2 we have one more drilled down chart where it has the information about the sum of the vaccination's raw percentage, sum of daily vaccinations, sum of day vaccinations per million and finally total number vaccinations happening as per the continent.

5.Figures

In this section we will explain about the graphs and charts which we visualize using our three different datasets as mentioned in the datasets section. According to the dataset we have drawn the visualization. In the first pie chart we are explain about manufacture percentage of vaccinations, second, we doing sum of daily vaccinations has been done.

Coming to bubble chart we have a comparison of daily vaccinations and total number of vaccinations are happening by country wise.

Figure1: Vaccination by Manufacturer

Figure 2: Total vaccinations by Continent

Figure 3: Total Deaths by Continent wise

Figure 4: Total vaccinations by Country

Figure 5: Vaccinations by Continent wise

Figure3(a). Drill down line graph of Figure 3

5. Summary

In this section we will describe about the summary of features we have implemented in different kind of visualization techniques implemented.

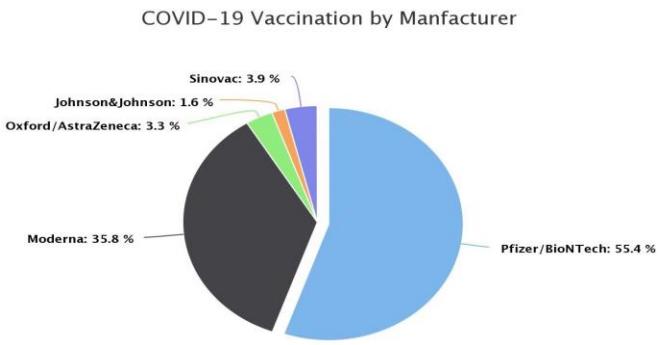


Figure1: Vaccination by Manufacturer

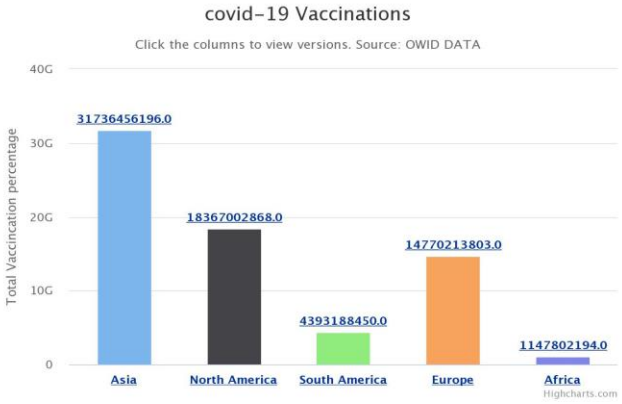
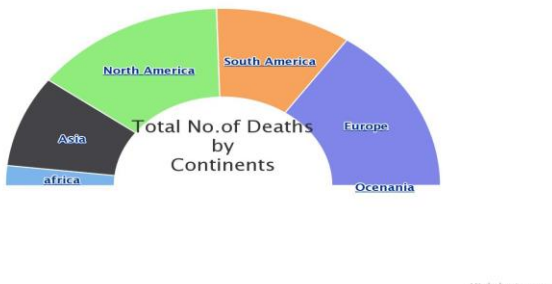


Figure 2: Total vaccinations by Continent



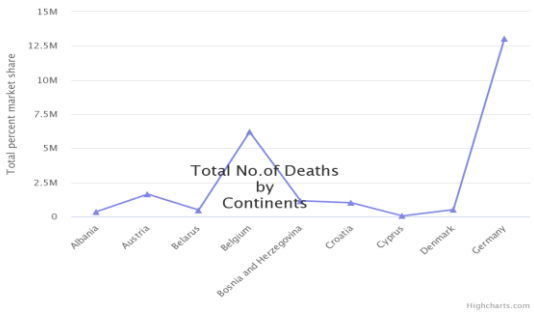


Figure3(a). Drill down line graph of Figure 3

Figure 3: Total deaths by Continent wise

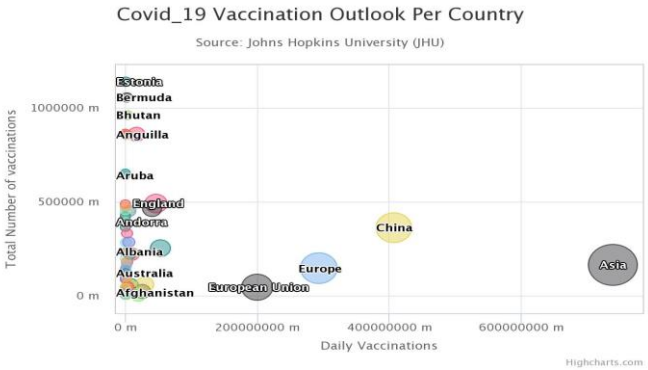


Figure 4: Total vaccinations by Country

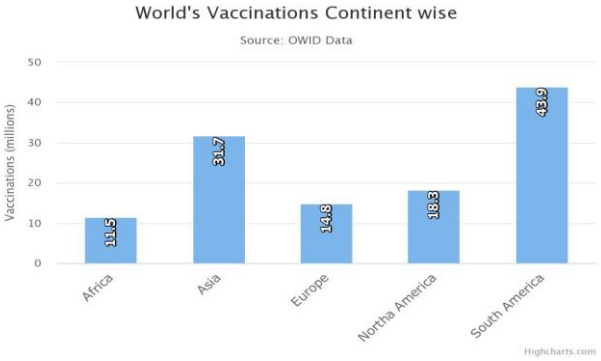


Figure 5: Vaccinations by Continent wise

6. REFERENCES

[1] https://github.com/owid/covid-19-data/tree/master/public/data/vaccinations

[2] COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (Johns Hopkins University, accessed 7 April 2021); https://arcg.is/0fHmTX

[3] Hale, T. et al. A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker). Nat. Hum. Behav. 5, 529–538 (2021).