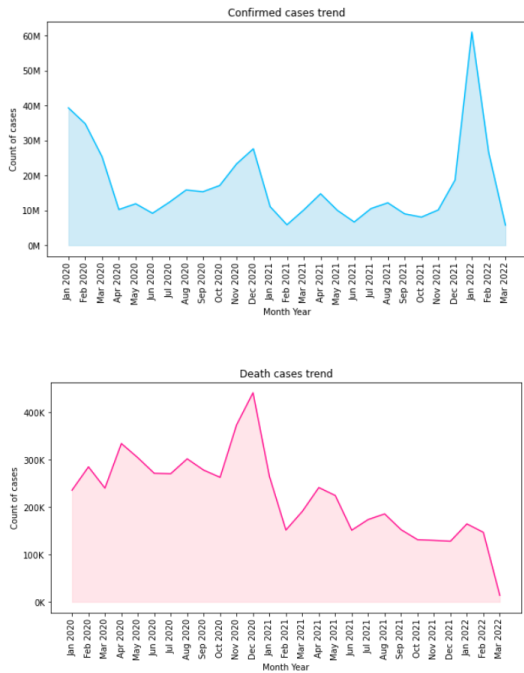


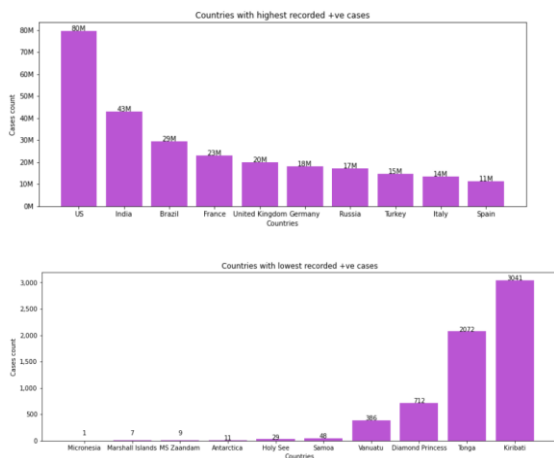
TIME SERIES ANALYSIS OF COVID19 DATA

Brief about Data: 1. Obtained the time series data related to confirmed cases, deaths and recoveries from a Git hub page maintained by John Hopkins University. 2. Vaccination data from WHO website.

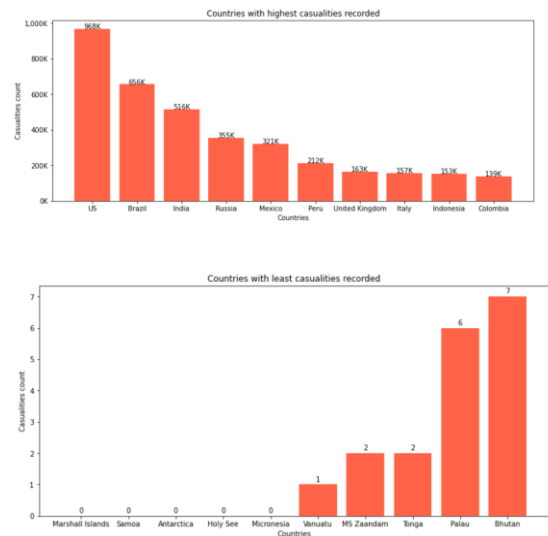
Cases and Deaths time series Trends



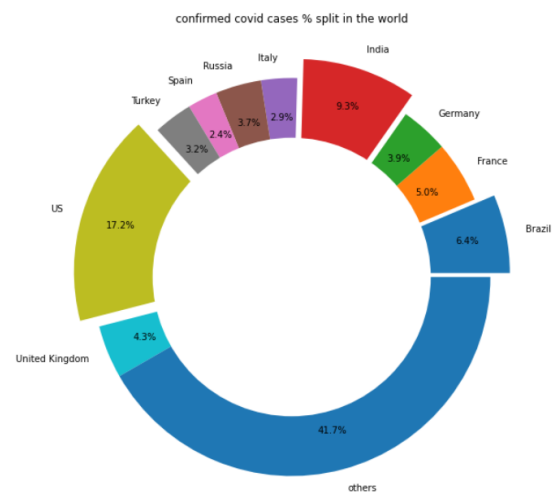
The number of cases in each month are plotted for the past 2 years, we observe that there is spike in the number of confirmed cases around Nov 2020, at the same time the deaths cases also spiked up. We notice another spike around Jan 2022, but the deaths have not increased in the same way as before, we may account this to multiple factors, like change in variants, or immunisation because of vaccination.



The United States has registered the maximum number of cases as well as deaths, India is in the second place for the same. The least cases are registered by Micronesia and Micronesia along with Marshall Islands, Samoa, Antarctica, Holy see have not registered any deaths so far.



If we look at the percentages, we see that the cases in US constitute 17.2% of the total cases. India accounts to 9.3%. The top 10 countries constitute around 60% of the total positive cases.



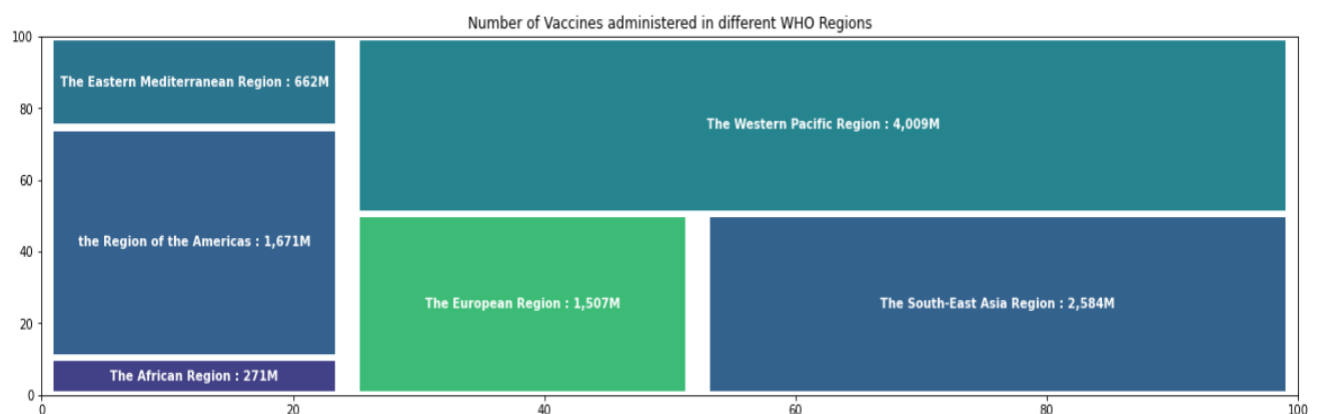
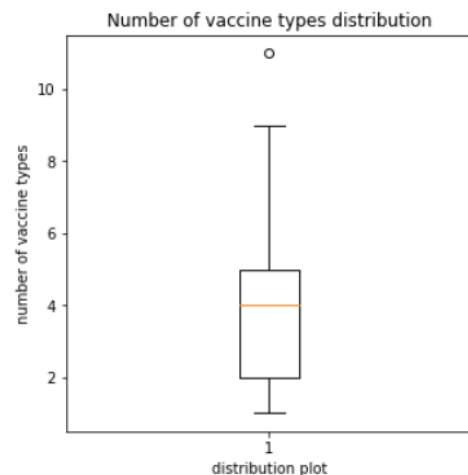
Vaccination Data Analysis:

Vaccine against COVID19 was first administered in July 2022, in China, followed by Bahrain, Laos and so on.

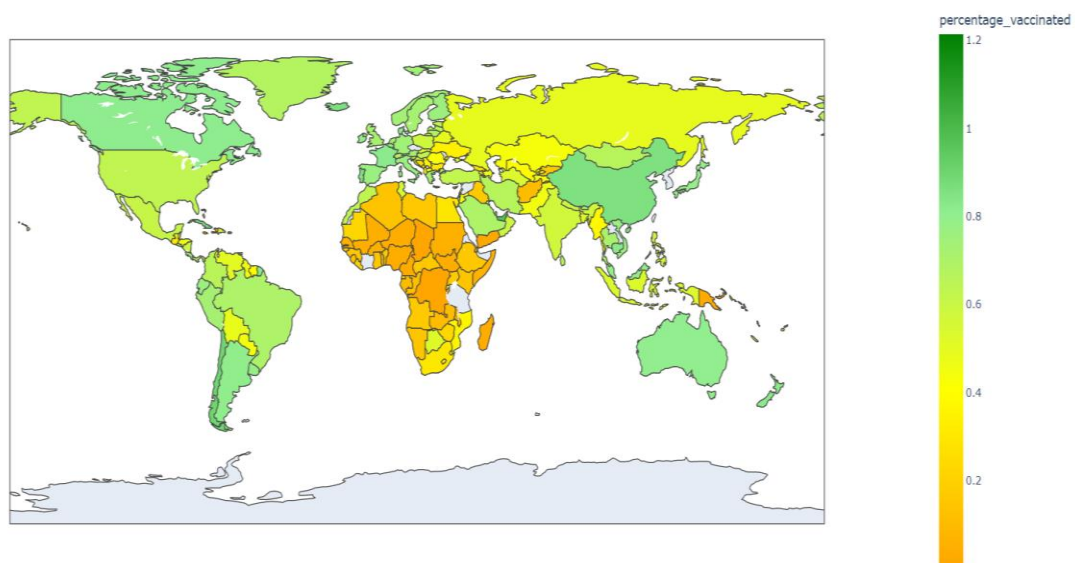
	COUNTRY	FIRST_VACCINE_DATE
0	China	2020-07-22
1	Bahrain	2020-11-04
2	Lao People's Democratic Republic	2020-11-25
3	Canada	2020-12-14
4	United States of America	2020-12-14

Various types of vaccines are available in the market and used throughout the world. If we look at the distribution of the number

of vaccine types, we see that most of the countries use 2 to 4 different types of vaccines, the maximum types of vaccines used by 1 country are 12.



Compared to all the WHO regions the western pacific region has administered maximum number of vaccines, followed by south-east Asia region, as these contain densely populated countries.



To better understand the situation of vaccines we have calculated the percentage of population who are completely vaccinated for each country. The map shows that most countries in Africa continent have lower percentages of vaccinated individuals when compared to the other parts of the world.