Covid Cases and Deaths WorldWide

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Description:

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus.

Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with COVID-19 and become seriously ill or die at any age.

The best way to prevent and slow down transmission is to be well informed about the disease and how the virus spreads. Protect yourself and others from infection by staying at least 1 meter apart from others, wearing a properly fitted mask, and washing your hands or using an alcohol-based rub frequently. Get vaccinated when it's your turn and follow local guidance.

The virus can spread from an infected person's mouth or nose in small liquid particles when they cough, sneeze, speak, sing or breathe. These particles range from larger respiratory droplets to smaller aerosols. It is important to practice respiratory etiquette, for example by coughing into a flexed elbow, and to stay home and self-isolate until you recover if you feel unwell.

About Dataset:

The cases of Corona Virus Disease (Covid) around the world are included in this dataset. The number of nations, total cases per country, active cases, total recovered, and the total number of persons who died with COVID-19 are some important elements of this dataset. The data go all the way back to the first instance of Covid that has been documented, although it is unclear when this data is updated.

Data Collection:

Covid-cases-and-deaths-worldwide - This dataset has been taken from Kaggle website.

Link: https://www.kaggle.com/datasets/themrityunjaypathak/covid-cases-and-deaths-worldwide

It is a Healthcare dataset which provides a brief summary of a Country's COVID-19 impact.

```
data = pd.read_csv("C:/Users/aravi/Downloads/covid_worldwide.csv",header =0)
data.head()
```

	Serial Number	Country	Total Cases	Total Deaths	Total Recovered	Active Cases	Total Test	Population
0	1	USA	104,196,861	1,132,935	101,322,779	1,741,147	1,159,832,679	334,805,269
1	2	India	44,682,784	530,740	44,150,289	1,755	915,265,788	1,406,631,776
2	3	France	39,524,311	164,233	39,264,546	95,532	271,490,188	65,584,518
3	4	Germany	37,779,833	165,711	37,398,100	216,022	122,332,384	83,883,596
4	5	Brazil	36,824,580	697,074	35,919,372	208,134	63,776,166	215,353,593

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Data Cleaning & Preprocessing:

This is a most important process in order to improve the data quality by removing inconsistent data like duplicate, incomplete data, null values etc..

1. Conversion of datatypes.:
   Our columns are in object datatype and also they having ',' separator, which makes the data type as string object. so, converting into float number by removing the ','.
2. Renaming columns:
   In order to make the dataset understandability and interpretation easy.
3. Checking Null values:
   To know how the data distribution and data inconsistency.

```
#HAndling missing values
data.isnull().any()

Country          False
Cases            False
Deaths            True
Recovered         True
Active_Cases      True
Tests             True
Population        True
dtype: bool
```

   Recovered and Active_cases are missing in the 20 same records. So, we removing those data entries.
   - Population of China is given null. But we know that it's the biggest populated country. So we replace it 1.4 billion. (according to census 2020) and removing 2 other unknown countries which having population null.
   - Replacing null to '0'.
   These are some steps I did for cleaning my dataset.

Data Dictionary:

Variable	Type	Description
Country	Object	The different nations in the world.
Population	float64	The no. of population each country having.
Cases	float64	Total number of people who got infected with covid.
Recovered	float64	Total number of people recovered from covid.
Deaths	float64	People died because of virus.
Active_Cases	float64	People who currently taking treatment or suffering from virus.
Tests	float64	The total number of covid tests done.

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Data Analysis:

Top 10 countries which had the most and least deaths due to covid-19?
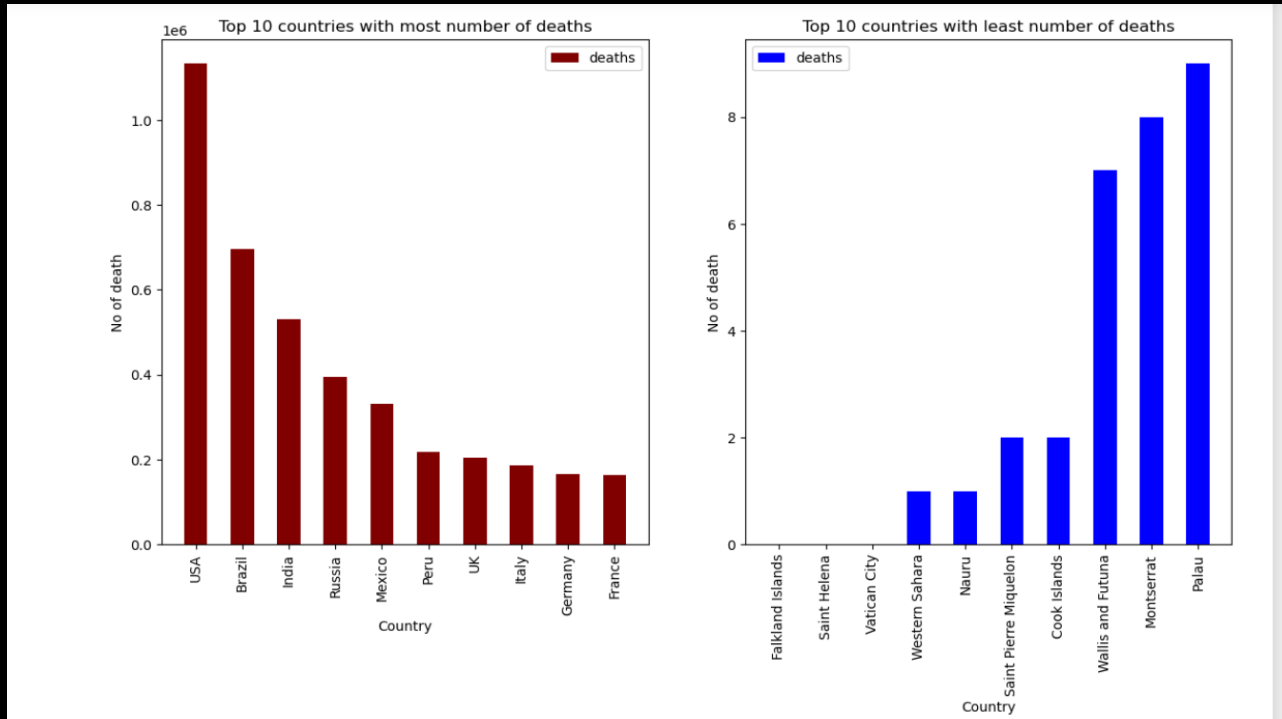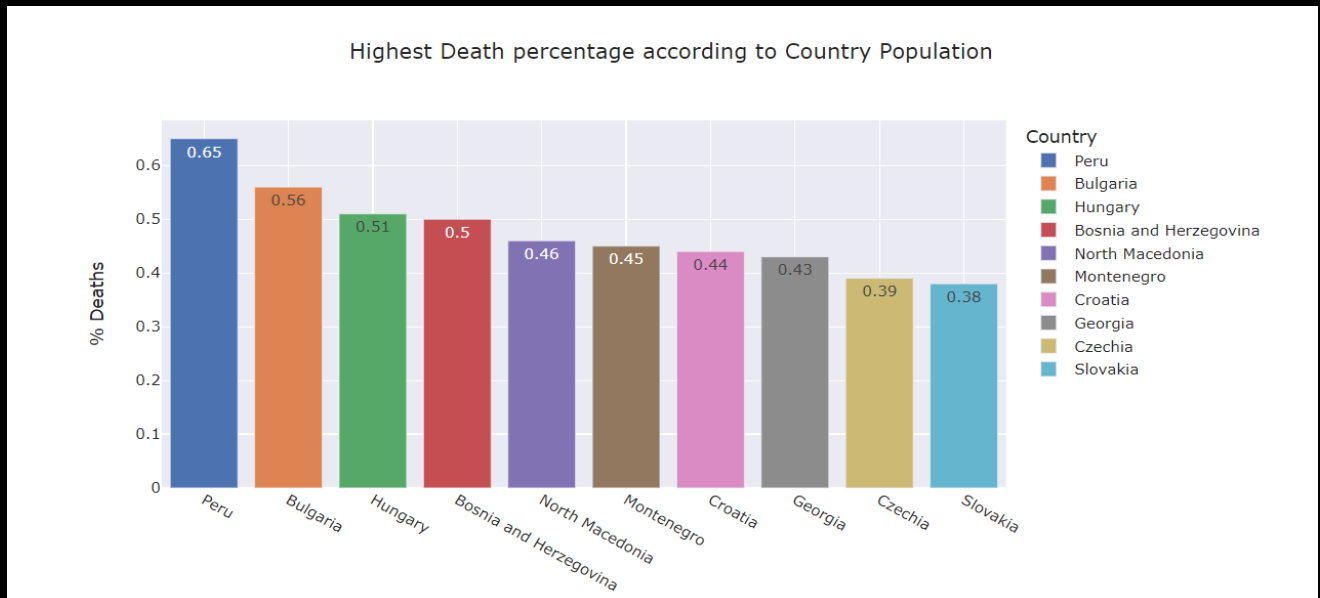

USA, Brazil lost more than 70 million people.

On the other side, the smaller islands had the deaths in numbers.

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Which country people are having less immunity against covid ?

Highest Death percentage according to Country Population

The countries with more death percentage are considered as having weak immune system.
Peru, Bulgaria, Hungary had lost more than 50 percent of their population by covid.

Which country people are strong against covid 19?

Highestrecovery percentage Countries
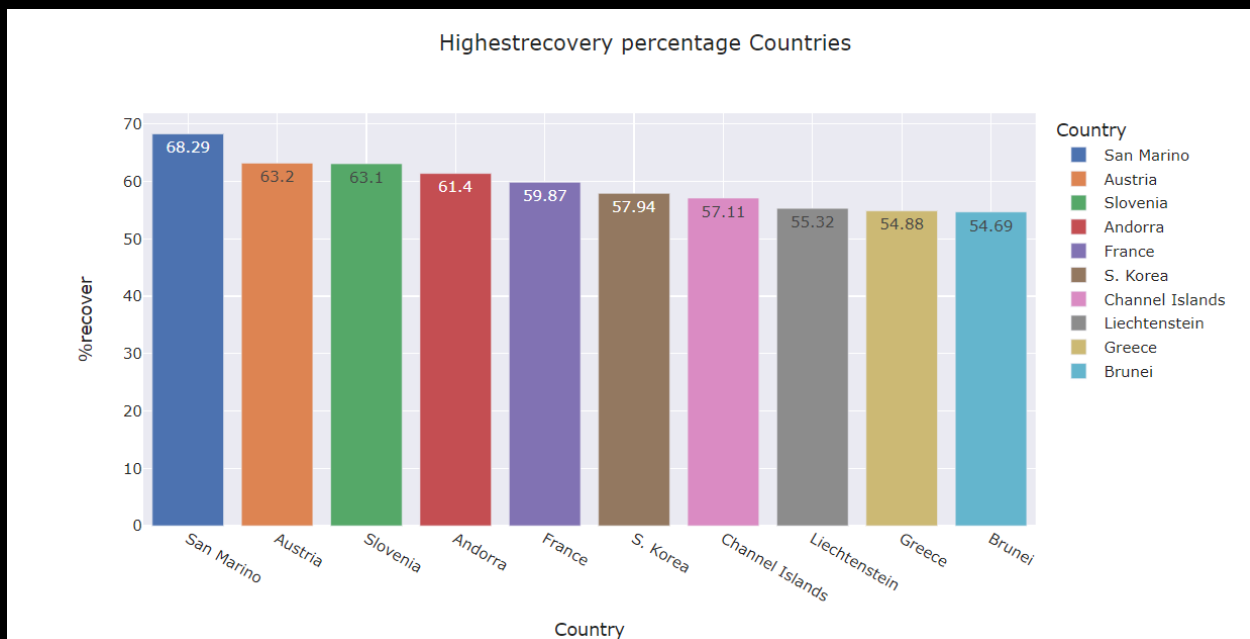
San Marino, Austria and some other countries are having good percentage from recovery even though having most cases percentage.
Here, the recovery percentage drawn from total recoveries to the population of their country to get better stats of strong against covid.
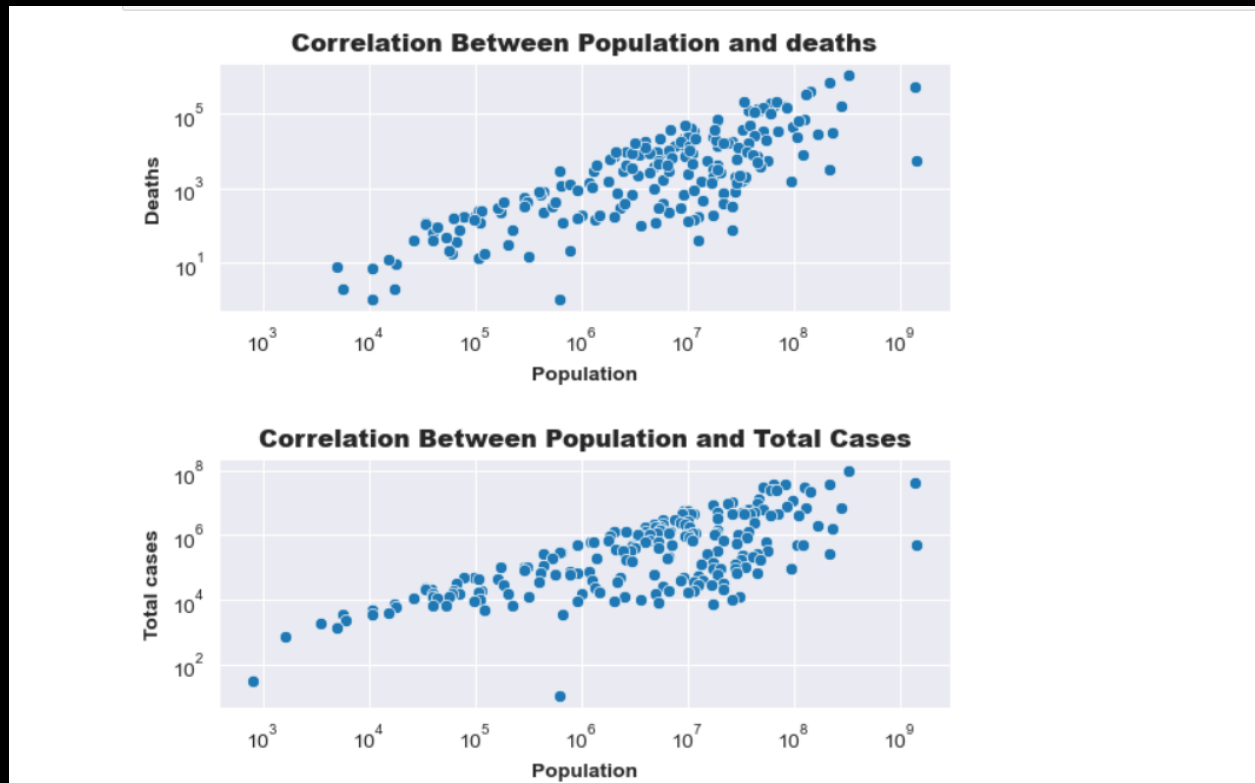
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 # Currently in which countries the covid situation is still severe?
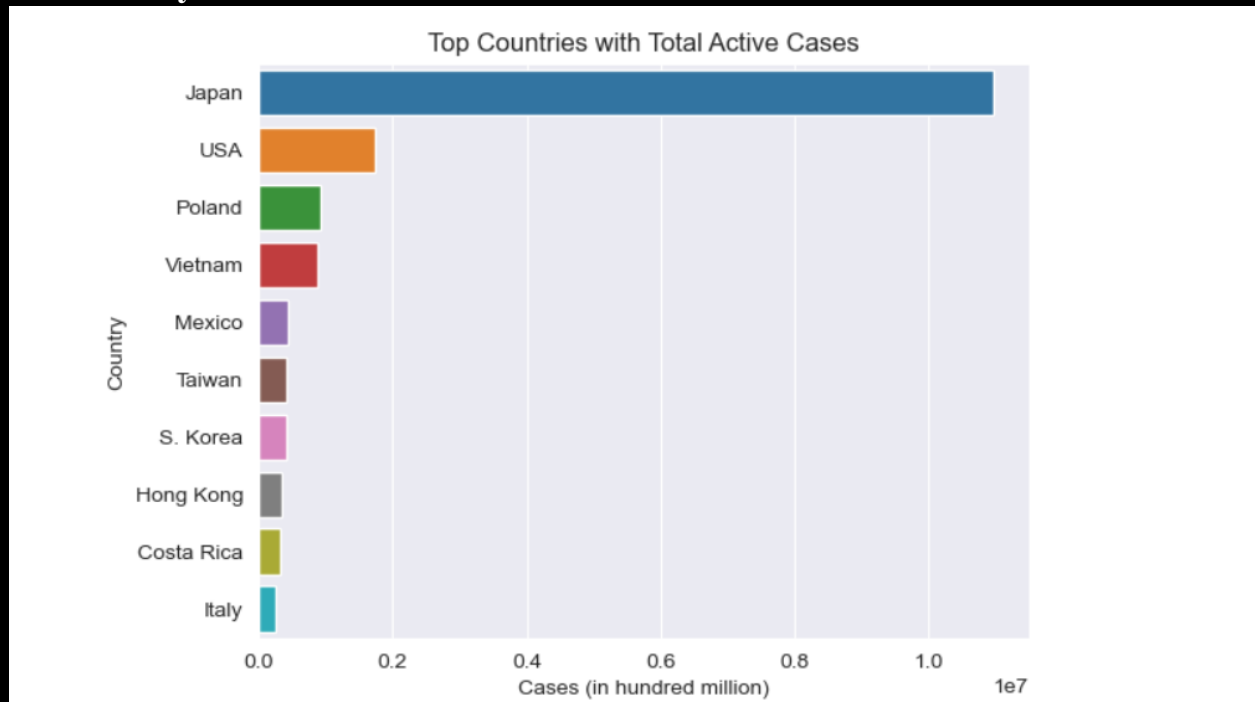
Currently the Japan country having more active cases which are more than 100 million.
Followed by USA, Poland, Vietnam.

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 # Is the population factor what makes the country covid situation more serious?
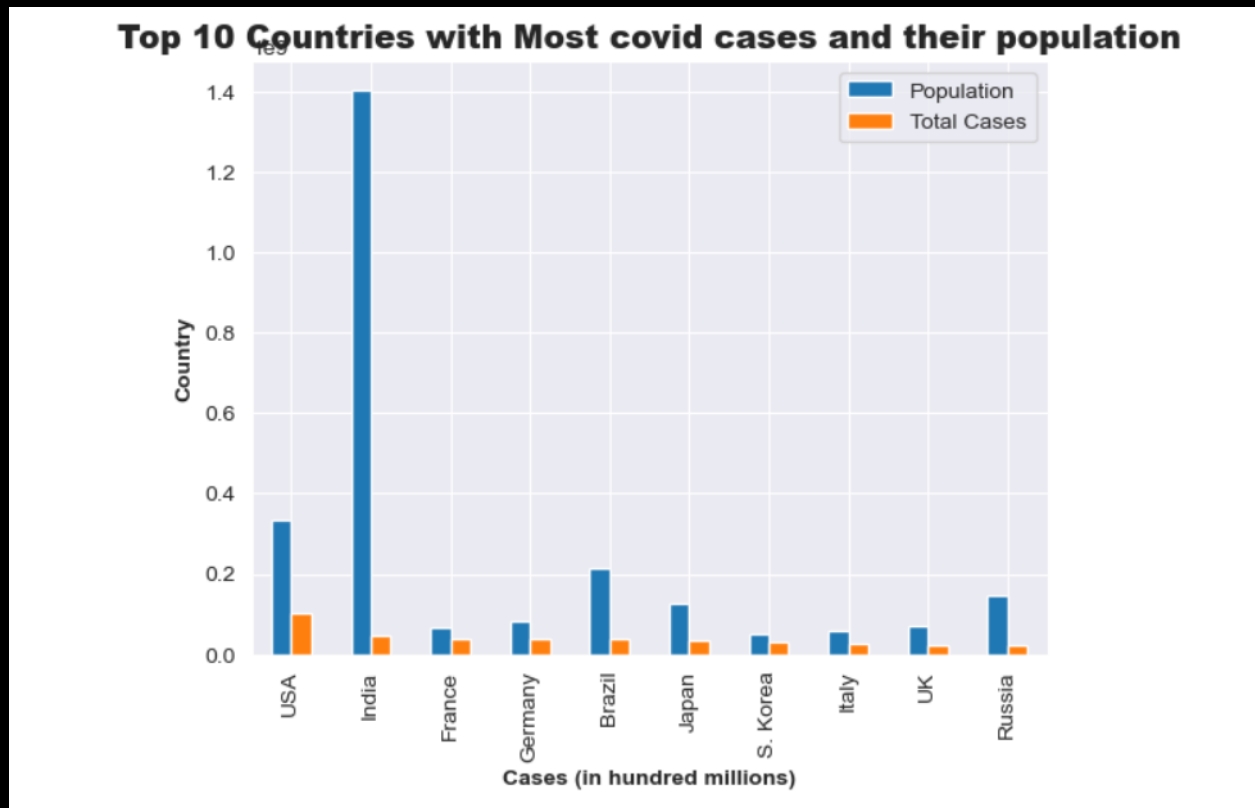

We can clearly see that there is a positive correlation between the population and cases, deaths. So, indeed population is an important factor with the spread of covid virus.

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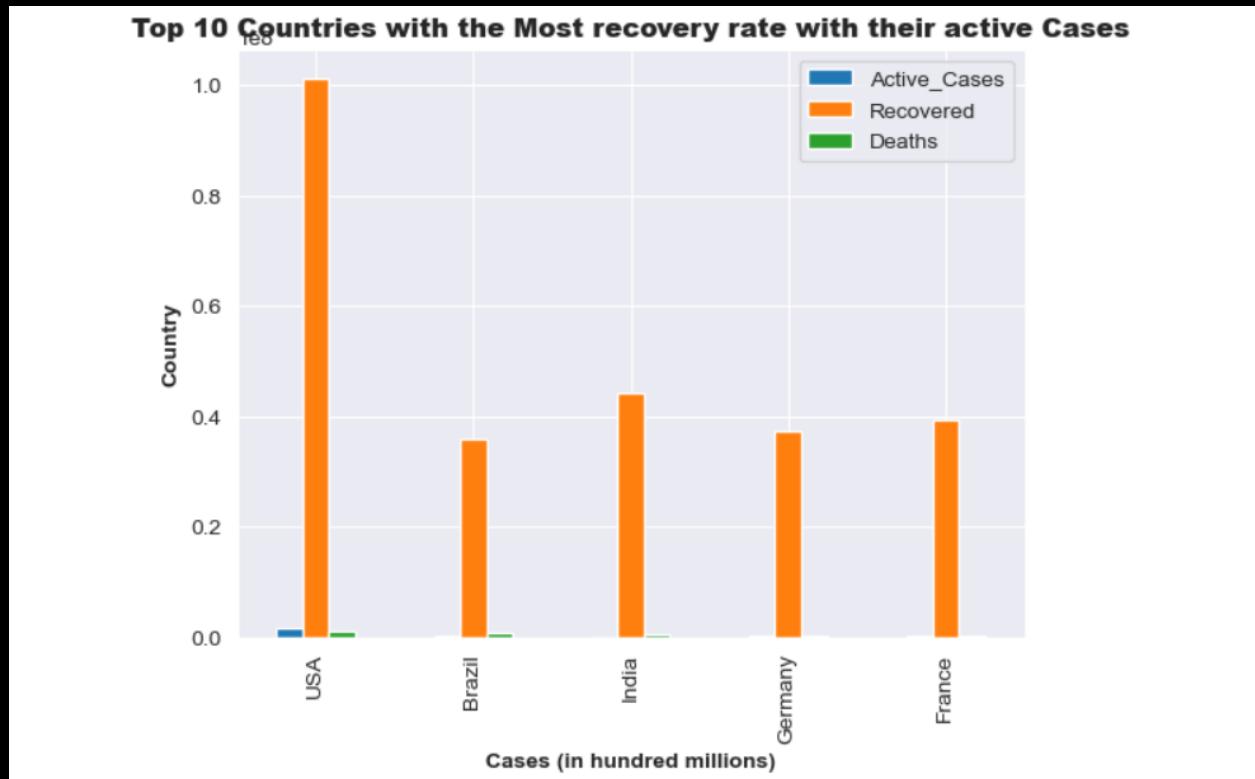**# Top 10 countries with most covid cases and their population ratio?**

India is having less ratio than any other countries list here.

France, South korea , Italy countries affected by virus more than 60 percent of the population.

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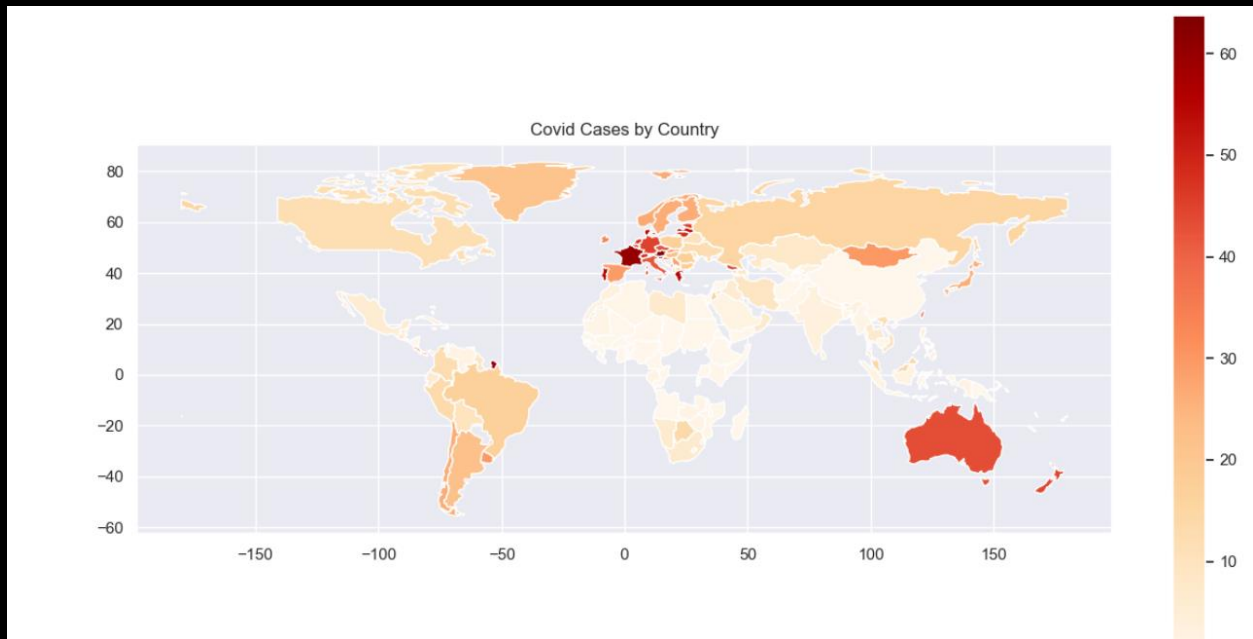**# Top countries recovery to death ratio & other stat analysis? (active, deaths, recovered)**

The recovery ratio to active and deaths for USA is like 1:30 almost. USA

USA covid situation was worse than other countries, like 1 out of 30 people who got affected had died.
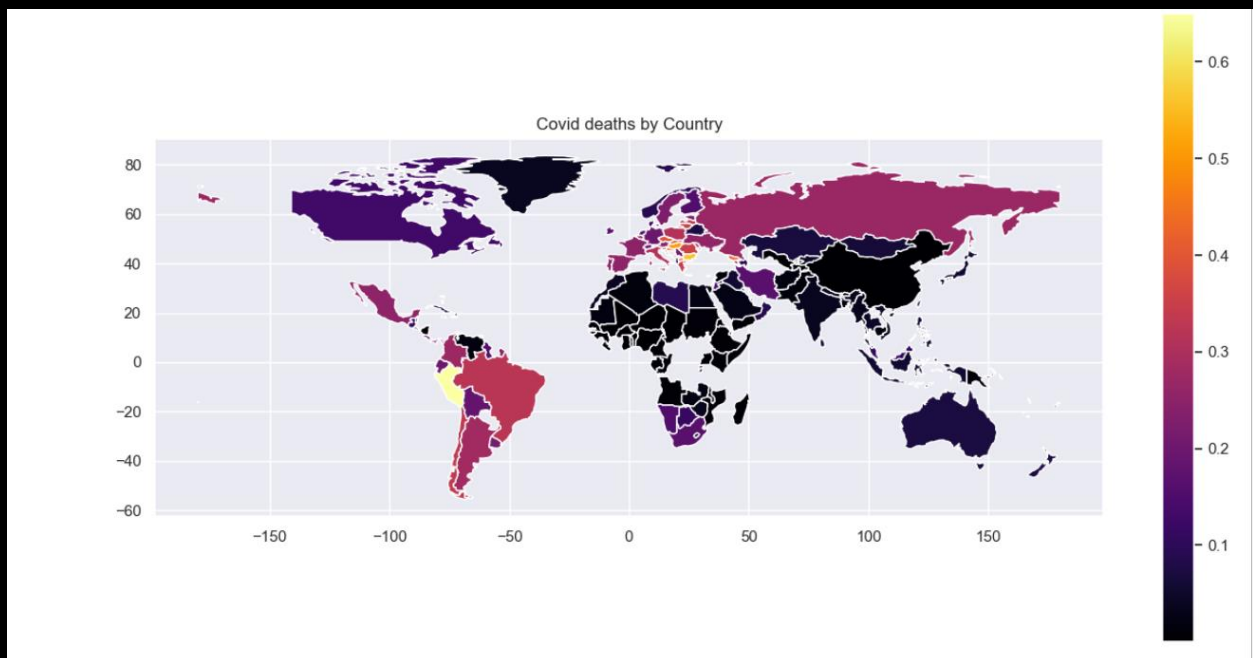
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 # How corona virus spread across the world?

By map view we clearly see that Europe, North America and Australia Continents affected by the most.

(Due to the software issue in jupyter, the world map of USA is not visible).
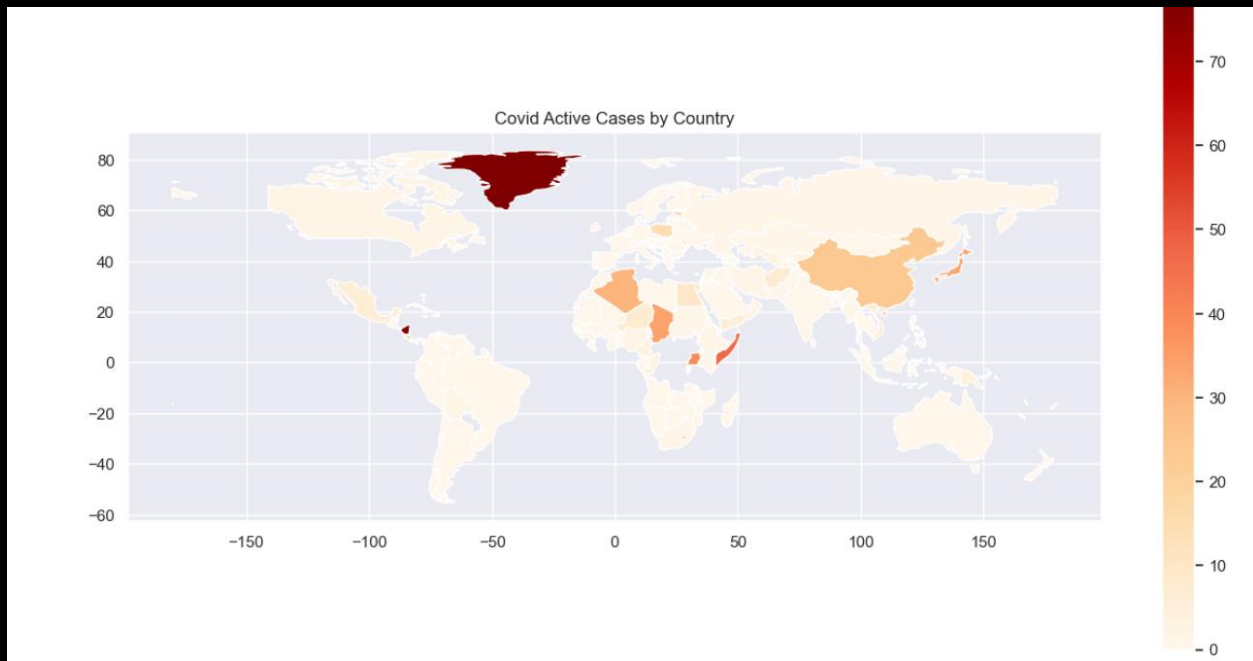
 # Covid deaths country wise visualization by percentage?

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Europe, North America and South America continents were having more deaths. And on the otherhand Africa, Asia and Australia are having less according to their population.

Currently which countries are unsafe to travel?

These countries having more active cases according to their population.

So, it's better to avoid if you are planning to visit the above countries.

I used jupyter notebook for visualizing the data analysis.

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