STUDENT NAME:

CHRIS MARTIN SIBY

AVINASH HARESH

CLASS:

S4 CSE ALPHA

PROJECT TITLE:

 COVID 19 ANALYSIS

AIM:

To plot and visualize covid 19 dataset using visualization tools in python

ABSTRACT:

The COVID-19 pandemic caused by SARS-CoV-2 remains a significant issue for global health, economics and society. A wealth of data has been generated since its emergence in December 2019, and it is vital for clinicians to keep up with this data from across the world at a time of uncertainty and constantly evolving guidelines and clinical practice.

 So we planned to visualize and analyse the datasets to get an idea of how this pandemic has effected India and the entire globe.

Three datasets were taken

1. covid 19 cases in india

2. population of india

3. covid 19 cases of the world

 Dataset which we took was the report of covid cases and it was recorded on daily basis till 10 May 2020. The first dataset consisted of data across Indian States and Union Territories. Whereas the third dataset consisted of data across different countries in the world. The first and the third dataset correctly showed statistics under 3 categories, confirmed, recovered and deceased (deaths).

The visualization tool which we used mainly was numpy, seaborn, pandas and matplotlib. Corresponding bar graphs, line graphs were plotted and hence spread of pandemic was visualized.

DATASET USED

COVID 19 cases in India - https://www.mygov.in/covid-19

Population of India - http://www.indiaonlinepages.com/population/india-current-population.html

COVID 19 world cases - https://www.worldometers.info/coronavirus/countries-where-coronavirus-has-spread/

RESULTS/FINDINGS:

- The total number of confirmed, active, recovered and deceased (deaths) COVID 19 cases reported till May 10 2020 in India was found out using the dataset.

- Secondly heat maps and bar graphs were plotted indicating the states that had the most number of confirmed cases, recovered cases and deaths till May 10 2020.

- Thirdly a new feature called cases per 10 million was added to the dataset using another dataset file that contained population of each state in India for better understanding of how each state is effected by COVID 19.

- For more clearer picture of the how pandemic has effected the states two different features were calculated and added to the dataset 1. Recovery rate 2. Fatality rate of each state and line graphs were plotted indicating each states Recovery and Fatality rate.

- Finally a third dataset containing data of covid 19 confirmed, recovered and deceased cases of all countries around the globe were analysed.

CONCLUSION:

The dataset over spread of pandemic across states/union territories was visualized using python.

A wealth of data has already been generated on COVID-19 since early January 2020. Nevertheless, key questions remain regarding understanding the population at risk and age groups, the proportion of individuals who have had asymptomatic infections and their transmission potential, the endemicity and seasonality of COVID-19, and whether stringent physical distancing measures will be effective in countries that are severely affected. The main challenge in managing COVID19 remains the patient density; however, accurate diagnoses as well as early identification and management of high-risk severe cases remains a daily battle for many clinicians. For improved management of cases, there is a need to understand test probability of serology, qRT-PCR and radiological testing, and the efficacy of available treatment options that could be used in severe cases with high risk of mortality.