



Data Analysis of Covid-19 Outbreak and Providing Relief All Over the World

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Abstract : COVID-19 outbreak was first reported in Wuhan, China and has spread to more than 50 countries. WHO declared COVID-19 as a Public Health Emergency of International Concern (PHEIC) on 30 January 2020. Naturally, a rising infectious disease involves fast spreading; endangering the health of large numbers of people, and thus requires immediate actions to prevent the disease at the community level. Therefore, Corona Tracker was born as the online platform that provides latest and reliable news development, as well as statistics and analysis on COVID-19 cases. This research paper is written as a project and aims to predict and forecast COVID-19 cases, deaths, and recoveries through an online platform. The model helps to interpret data according to the country wise and as per the date user want to access the data, through charts and on a geographical map on which data of COVID-19 is illustrated. This model will also provide the COVID-19 vaccination details as well as the emergency numbers as per the user location in case if there is a worse health situation. The WHO advice as well as prevention and symptoms of COVID-19 diseases will also be there as an extra information to the users.

I. INTRODUCTION

An infectious disease outbreak occurred worldwide that was not usually expected.

Typically a rising infectious disease involves fast spreading, endangering health of large number of peoples and thus require immediate action to prevent the disease worldwide. The symptoms includes cough, fever, shortness of breath, fatigue, diarrhea. In more dangerous cases it can cause pneumonia and even death. The period of corona infection can last for 2 weeks or more.

Social media networks have functioned as channels for firsthand information from which public can acquire disease related information during this pandemic. This platform also helps to share information with friends, families, neighbours in real time. This information will aware people worldwide about the COVID situations and let them to stop this spread by staying at home. But these platforms may also served the wrong information spread by some peoples as to scare people and for fun which is not ethical in this COVID situation.

Therefore CORONA TRACKER was born and invented as the online platform that provides the latest and verified news development, statistics through the charts and graphs, and analysis on COVID-19. We propose a framework which will provide accurate information and also display information through graphical representation by using maps.

As the virus that causes COVID-19 began to spread from person to person in communities (**community transmission**), scientists needed to track the disease and try to slow its spread. The COVID-19 cases need to be track in the area wise so that its spread can be control worldwide by certain restrictions by the government.

To do so, we have developed and designed a COVID-19 TRACKER SYSTEM to track the spread of this dangerous and hazardous corona virus worldwide and to represent the COVID cases from the past to present days through charts and on the geographical map showing the worldwide situation of this corona virus spread so that this data can be easily understood by every person.

The use of map representation will be very helpful to the persons who has language barrier and in the rural areas so that they can understand the spread of this COVID-19 virus, in a very easy manner by this graphical representation.

The main objective of our project is to concentrate on maximizing user awareness about COVID and providing COVID cases details to experts, data analysts and to the general public to make them aware about the worse situation worldwide due to this corona virus.



II METHODOLOGY

DATA SOURCE:

Real time data fetching of the COVID cases is done and visualized in our website through charts , animations and is represented on the map. Then the fetched data is used for modeling our project by showing the total number of cases and other details on the website.

The use of geo-plugins is done to fetch the IP address of the user who has accessed our website ,so that the data which is relevant for that IP address is shown when the website gets loaded. The data is fetched through the use of API from the internet in the form of JSON file which is used in our project to show the data. The JSON file contains all the details of all the countries worldwide. The data accuracy is maintained through the use of regular updated API of the corona virus cases.

DATA VISUALIZATION:

The data obtained and captured through corona tracker is in very simple format. This seems not to be attractive and interactive to the users, for that purpose the project contains the use of graphs, charts, and maps to visualize the data in graphical form for having a great and attractive user interface.

The use of charts and map box are also done by the use of API from the internet by including the corresponding links of that chart and map box files in our HTML document.

DESIGNING:

In today's scenario the look and feel of every product or service matters, for that purpose designing need to be done in proper format. For designing and decorating our platform we have make use of Cascading Style Sheets and the very known CSS framework Bootstrap. The use of animation is also done through the CSS.

III FINDINGS

The cases reported are visualized in analytics dashboard to show the outbreak trend for confirmed, recovered and deaths cases for all regions and countries.

This aligns with our objective to show the outbreak progress over the period of time for each segment. Here we can find a sudden increment in a amount of COVID cases date wise. It was noted that in the month of march and April the covid cases has occurred with a large amount.

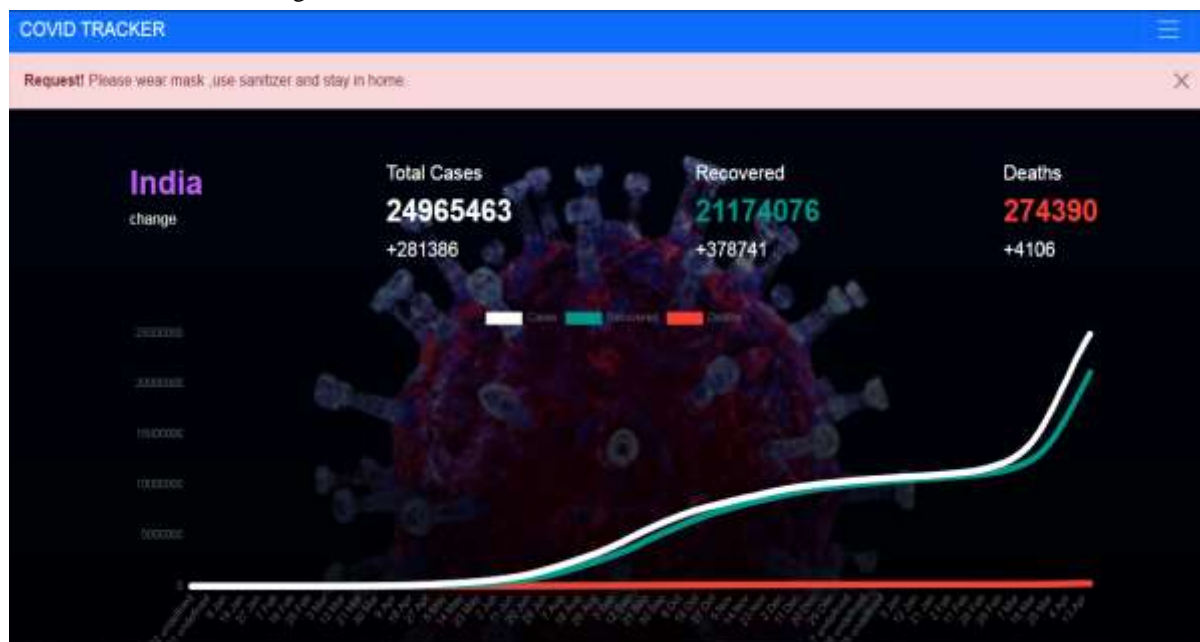


Fig.1 Outbreak trend over time



Fig.2 World map of affected regions

Here The figure.1 is showing the current trends for covid-19 outbreaks as displayed in corona tracker website. The figure.2 is plotting by using an open source mapping library from mapbox.

CONCLUSION

This research presented current trends of COVID-19 outbreak till current date as visualized in corona tracker website. COVID-19 is still an infectious disease with some dangerous and hazardous properties. The outbreak spreads are largely influenced by each country's policy and social responsibility.

In a pandemic like this, providing timely information to the public is paramount. A platform like corona tracker will assist the government and authorities to disseminate verified articles, provide updates to the situation, and advocate good personal hygiene to the people.

Corona tracker is built out of as a social responsibility to spread awareness to the common people by providing the scientific based data analysis and verified data with a great accuracy and reliability. As there are many fake websites and platform regarding this corona virus which provides the false data with no accuracy and reliability which afraid the peoples and misguide them, to avoid such fake platforms we have designed and built an reliable and accurate CORONA TRACKER platform.

As data transparency is crucial inside the government, it is also our responsibility not to spread unverified news and to remain calm in this situation. The corona tracker project has shown the importance of information dissemination that can help in improving response time, and help planning in advance to help reduce risk. Further studies need to be done to help contain the outbreak as soon as possible.

Our goal is to make this corona tracker website more user attractive and simple to interact and understand so that our website can spread more and more awareness about this hazardous virus to each and every common people in the whole world.

This paper is still an ongoing research as many more investigations regarding this disease can be carried out and many more functionalities can be add upon to facilitate users. The ultimate goal of every individual should be to be aware about this disease and permanently kill the virus from the world together.

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