



COVID 19 Tracker Web System

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COVID 19 TRACKER WEB SYSTEM

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Abstract— COVID-19 tracker is a React based responsive web application which provides you the real time data of current COVID-19 cases all across the world. It will show you how many cases are recently recorded and how many recovered as well as the total cases being recorded in a particular country. The app will have a leaflet package of React which will provide us the interactive map thus we will try to make it different and more interactive than other trackers present out there. These maps will enable the user to see real time data of total cases in any given country. The easy to use GUI clubbed with the interactive maps and graphs will help us to provide the vital information that the users need in order to stay updated with the COVID-19 situation that is rocking the world and subsequently affecting the economy at a global scale. The web application will be accessible through desktop or mobile to provide the user with ease of access. We aim to provide accurate data with graphs. Our aim is to alleviate some stress from the user who feels anxious about being uninformed about what might be happening without them. Our app also serves as a learning opportunity for the members along with a great incentive to help people. Therefore, CoronaTracker was born as the online platform that provides latest and reliable news development, as well as statistics and analysis on COVID-19. This paper is done by the research team in the CoronaTracker community and aims to predict and forecast COVID19 cases, deaths, and recoveries through predictive modelling. The model helps to

interpret patterns of public sentiment on disseminating related health information, and assess political and economic influence of the spread of the virus. 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. 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.

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Keywords - COVID -19, Web Application, Real time data, Maps, GUI, Graphs.

INTRODUCTION

The contagious coronavirus, or more technically known as COVID-19, has spread all over the world

major parts of the world. On 27th July, 2020, more than 16.52M cases of COVID-19 were reported in about 187 countries and territories [2]. On 30th January, 2020, the first case of coronavirus pandemic in India was reported, and the number of cases in India has now reached more than 1.48M [3].

An infectious disease outbreak is the occurrence of a disease that is not usually expected in a particular community, geographical region, or time period [4]. Typically, a rising infectious disease involves fast spreading, endangering the health of large numbers of people, and thus requires immediate action to prevent the disease at the community level [5]. COVID-19 is caused by a new type of coronavirus which was previously named 2019-nCoV by the World Health Organization (WHO). It is the seventh member of the coronavirus family, together with MERSnCoV and SARS-nCoV, that can spread to humans [1]. The symptoms of the infection include fever, cough, shortness of breath, and diarrhea. In more severe cases, COVID-19 can cause pneumonia and even death [6]. The incubation period of COVID-19 can last for 2 weeks or longer [7]. During the period of latent infection, the disease may still be infectious. The virus can spread from person to person through respiratory droplets and close contact [8].

An 'infodemic' has accompanied the COVID-19 outbreak which is essentially an overabundance of information regarding the outbreak. As some of the information available to the public may not be accurate, it becomes hard for people to find reliable sources and trustworthy guidance when they need it [9]. Because of the high demand for appropriate and trustworthy information about 2019-nCoV, WHO technical risk communication and social media teams have been working closely to track and respond to myths and rumors via its headquarters in Geneva, its six regional offices and its partners. The organization is working continuously to identify the most widespread rumors that can possibly harm the public's health, such as inaccurate prevention measures or claims of cures. These myths are then rebutted with

evidence-based information. WHO is making public health information and advice on the COVID-19, including myth busters, accessible on its social media channels (including Weibo, Twitter, Facebook, Instagram, LinkedIn, Pinterest) and on their website [10].

Communication during emerging pandemics presents a distinctive public health education task. Health consumers must be informed about an impending health threat [11]. However, there may be difficulties in providing accurate information regarding the outbreak in the initial stage. This is mainly related to the high degree of uncertainty about the exact route of transmission, treatment of the infections, and prospects of recovery in an outbreak. All countries need to prepare existing public health communication networks, media and community engagement staff for a possible case in their country, as well as for the appropriate response if it happens. The governments should coordinate communications with other response organizations and include the community in response operations. WHO stands ready to coordinate with partners to support countries in their communication and response to community engagement.

We propose a comprehensive framework to manage health information data as a tool for public health practitioners in managing epidemics and crafting public health response and policy. This study focuses on the role of audiences in the process of disseminating health risk information and examines behaviors that contribute to information amplification upon hearing the news.

The structure of this paper is as follows; Section 1 introduces COVID-19 and CoronaTracker community, as well as explains the significance of this research. Section 2 describes on related works in predictive modelling of the paper and news-based sentiment analysis for this research on psychological, politics and economics aspects. Section 3 explains our study design and methodologies. Section 4 presents our findings in current trends, predictive modelling and sentiment analysis of the outbreak. Our findings are discussed in Section 5 and this paper is concluded in Section 6

EASE OF USE:

The web application will be accessible through desktop or mobile to provide the user with ease of access. We aim to provide accurate data. Our aim is to alleviate some stress from the user who feels anxious about being uninformed about what might be happening without them. Our app also serves as a learning opportunity for the members along with a great incentive to help people.

Literature Reviews:

In December, 2019, a local outbreak of pneumonia of initially unknown cause was detected in Wuhan (Hubei, China), and was quickly determined to be caused by a novel coronavirus,^[9]namely severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The outbreak has since spread to every province of mainland China as well as 27 other countries and regions, with more than 70 000 confirmed cases as of Feb 17, 2020^[10]Perceived risk of acquiring disease has led many governments to institute a variety of control measures. We conducted a literature review of publicly available

We are still affected by the disease and facing the problems. It is a global threat and we do have to keep track of it now, and even in the future as well. Scientists all across the world are already trying their best to get a vaccine. It is controlled now in some countries, but not in India. The recovery rate is better than before but that's not enough, the problem is that it still exists. It is necessary to take precautions even if the conditions are better, but doing work is also important, we can't just sit around forever. For that we *need a tracker* so that we can keep track of cases around us and also stay updated with the data in order to be safe. With the help of the longitude and latitude coordinates of COVID-19 patients and at-risk people, clusters can be created with the help of some Artificial Intelligence and Machine Learning Techniques [5].

Problem Formulation:

THERE ARE TWO MAIN COMPONENTS:

1. Getting Real time data
2. Deploying data into database

Real time data ,news and information related Covid is tough to get as not all the countries share their true stats.

Required tools:

Major tools required for the development of the applications:

- 1. React** - React (also known as React.js or ReactJS) is an open-source JavaScript library for building user interfaces or UI components. It is maintained by Facebook and a community of individual developers and companies. React can be used as a base in the development of single-page or mobile applications.
- 2. HTML** - Hypertext Markup Language, a standardized system for tagging text files to achieve font, color, graphic, and hyperlink effects on World Wide Web pages.
- 3. CSS** - CSS describes how HTML elements are to be displayed on screen, paper, or in other media. CSS saves a lot of work. It can control the layout of multiple web pages all at

once. External style sheets are stored in CSS files.

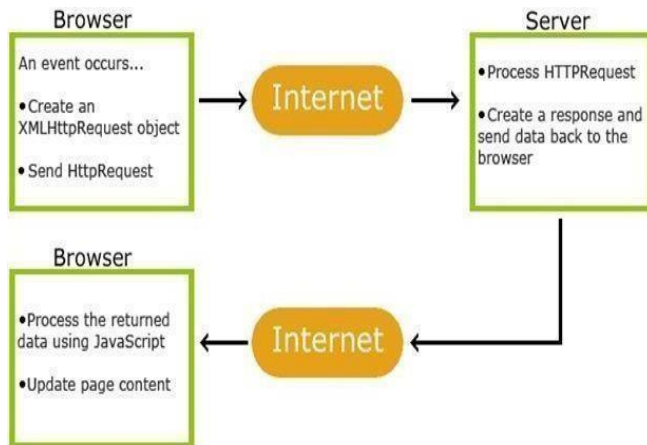
4. An IDE (Integrated Development Environment) - For the complete development and management for the source code and libraries. It's also used for final compilation of the software.

Feasibility Analysis:

There are a number of trackers present out there, but then what makes our project different from them?

- Simply put you can stay up to date by listening to the news and just looking at the data on some random website. Our app just provides the same with a much better GUI so that wherever you tap on the map you can get the data of that particular country, you can search individually by country name, enable your location to get the data of your country and more.
- Graphs and tooltips are available so that you can just hover your mouse over the slopes of data and get the record in tooltips which make it more responsive while you are on desktop.
- It is going to be mobile responsive so just simply adding it the home screen will save your time and you can use it as an app in your handsets.
- Our feasibility is attainable as the library used is apt and our goal of providing the users with accurate, and easily accessible data at their fingertips will be achieved.

Figures and Tables:



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