

IMPLEMENTATION OF WEB TECHNOLOGIES TO MAKE PEOPLE AWARE OF THE COVID-19 PANDEMIC

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Abstract- COVID-19 (2019-nCoV / SARS-CoV-2) tracer is an interactive, animated map for the COVID-19 outbreak. This web application will track the COVID-19 affect around the world. This site will provide the total number of affected people, deaths, recovered patients, active cases and so on. It will also provide some other features which includes visual mapping of how COVID-19 is spreading, statistical charts of infected number of people over time, deaths and recovered number of people over time, hotline number and many more. This information will be displayed over the map with the help of offline generated plot.ly maps with the huge collection of data. User can also write their blogs about their covid 19 experience and can make other people aware about it. User can read the news and also post their stories.

Keywords- Covid-19, Web Application, Tracer, Django,JavaScript.

1. Introduction

In March 2020, the World Health Organization (WHO) declared COVID-19 a pandemic, caused by the novel SARS-CoV-2 virus. Covid-19 tracer is a web application which is very useful in tracking the daily record of Corona Virus cases across the world. This site will provide the total number of affected people, deaths, recovered patients, active cases and so on. It will also provide some other features which includes visual mapping of how COVID-19 is spreading, statistical charts of infected number of people over time, deaths and recovered number of people over time, hotline number and many more. This information will be displayed over the map with the help of offline generated plot.ly maps with the huge collection of data. Since the Global pandemic COVID-19 is growing at very fast pace not only in the world but also in our country. So, it is required to analyse the growth rate of covid-19 in different parts of the country so that immediate action should be taken in order to prevent its growth based on Active cases, death rate, recovery rate etc.

2. Related work

Project Name	Authors	Date of Publish	Methodology	Objective	Conclusion
1.SARS Analysis on the grid	Vasa Curcin, Moustafa Ghanem and Yike Guo	2004	Data Analysis, Grid computing	Show how Discovery Net acts as Grid middleware when applied to real-world scientific problems such as the research into the evolution of the SARS epidemic	The benefits of the Discovery Net technology were shown on the example of two SARS workflows.
2. Mobile Application for Prescreening of Ebola Virus Disease	Solomon S. Oyelere & Danjuma K. Joro	2009	This research work employs the benefit of artificial intelligence (AI),	The study focused on the development of an intelligent system for prescreening of EVD and ascertain the opinion of the residents in a Nigerian city about the application	The research aimed at developing an intelligent system on mobile devices that will mimic the operations of the medical practitioner s in pre screening of suspected patients

<p>3. Evidence and future potential of mobile phone data for disease disaster</p>	<p>Jonathan Cinnamon, Sarah K. Jones, W. Neil Adger a</p>	<p>Received 1 March 2016 Received in revised form 28 July 2016 Accepted</p>	<p>Global health threats such as the recent Ebola and Zika virus outbreaks require</p>	<p>big data and digital humanitarianism discourses</p>	<p>Based on empirical findings from interviews and a scoping review, this</p>
<p>management</p>		<p>29 July 2016</p>	<p>rapid and robust responses to prevent, reduce and recover from disease dispersion</p>		<p>paper develops a typology of mobile data sources, types, and end-uses and a decision making tool</p>
<p>4 Go Covid: An interactive crossplatform based dashboard for real time</p>	<p>Sagnick Biswas Labhvam Kumar Sharma2, Ravi Ranjan3, Jyoti Sekhar Banerjee</p>	<p>June (2020)</p>	<p>mobile application, Artificial Intelligence Machine Learning (AI-ML) tool,</p>	<p>In response to this ongoing public health and economic emergency, we developed and deployed an interactive dashboard accessible online, to visualize and track reported cases of coronavirus disease 2019 (COVID-19) in real-time</p>	<p>Authors have proposed and implemented the mobile application Go-COVID with the aim in mind to make the society aware in maximum capacity about the current pandemic situation of the nation due to the COVID-19.</p>

3. Methodology

STEP 1: Retrieving data from different sources: -

In this step we will explore different data sources for getting perfect numbers for cases around the world. We will use WHO's official Website to get the most accurate data. All of the relevant data is collected and will be used in further steps.

STEP 2: Designing of front end: -

After completing the data collection process, front-end part of website will be designed using HTML, CSS, JavaScript and Bootstrap. It will be completely responsive and have easy to use user Interface.

In this step front end part of the website is designed in which basic html and CSS is written. JavaScript and bootstrap are also used to make the website dynamic. After doing this, the frontend part of the website is completed and the website is fully responsive.

STEP 3: Creating database for website: -

Next is to create database using all the data got in step 1. I will create database using SQLite as it helps to provide various functionalities in linking with backend. SQLite is a database engine that is distributed with Python and supports most of the SQL standard. It is ideal for developing database backed applications and because it uses the same SQL as larger systems, it is generally easy to port applications to a production database like MySQL or Oracle for deployment.

Connecting database:

SQLite stores databases as files and connecting to the database creates the file if it doesn't already exist. In a web application we need to maintain an open connection to the database so that the handler for any request that comes in can use the database to retrieve data to populate the page that is returned. One important thing to remember is that a web application is handling many requests for multiple users and each request handler might need to query and possibly update the database. This means that we need to manage connections to the database carefully.

STEP 3: Developing backend: -

Now I have this static website and complete database for total covid-19 cases in the world. It's time to build backend for the website and for that Django framework of python will be used.

Django is a widely used free, open-source, and high-level web development framework. It provides a lot of features to the developers "out of the box," so development can be rapid. However, websites built from it are secured, scalable, and maintainable at the same time.

STEP 4: Link API's to backend: -

Browser APIs are built into the browser — you can access them from JavaScript immediately. Third party APIs, on the other hand, are located on third party servers. To access them from JavaScript you first need to connect to the API functionality and make it available on your page. This typically involves first linking to a JavaScript library available on the server via a `<script>` element.

Security for browser APIs tends to be handled by permission prompts. The purpose of these is so that the user knows what is going on in the websites they visit and is less likely to fall victim to someone using an API in a malicious way.

Third party APIs have a slightly different permissions system — they tend to use developer keys to allow developers access to the API functionality, which is more to protect the API vendor than the user.

Step 5: Adding other useful functionalities

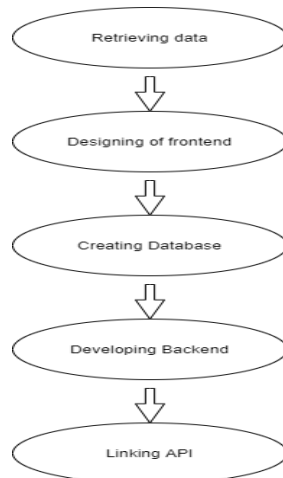
Different graphs can be added to make the visual representation of data. For representing the data of affected people WHO's website is used to get the data.

STEP 6: Blog Posting: - In this step I have added a section where a user can post the blogs in which they can add their struggle stories of covid. People can write about their blood groups so that whenever any plasma is needed then people can get information from this web application.

STEP 7: Vaccination: -

I have added a section in which people can register for their vaccination slot in their area. All the possible dates will be shown on the website so that people can book their slots.

Flow chart of Methodology



4. Results

STATEWISE WISE REPORT

STATE	CONFIRMED	RECOVERED	DECEASED
Maharashtra	1795959 +6159	1663723 +4844	46748 +65
Karnataka	878055 +1830	841432 +1333	11714 +19
Andhra Pradesh	864674 +831	845039 +1178	6962 +8
Tamil Nadu	774710 +1534	751535 +1873	11655 +18
Uttar Pradesh	533355 +2306	500835 +1328	7644 +29
Kerala	578364 +6491	511008 +5770	2122 +26
Delhi	545787 +5246	496780 +5361	8720 +99
West Bengal	466991 +3528	434067 +3605	8172 +51
Odisha	316645 +730	308102 +728	1757 +18
Telangana	266904 +993	254676 +1150	1444 +4

Figure:1

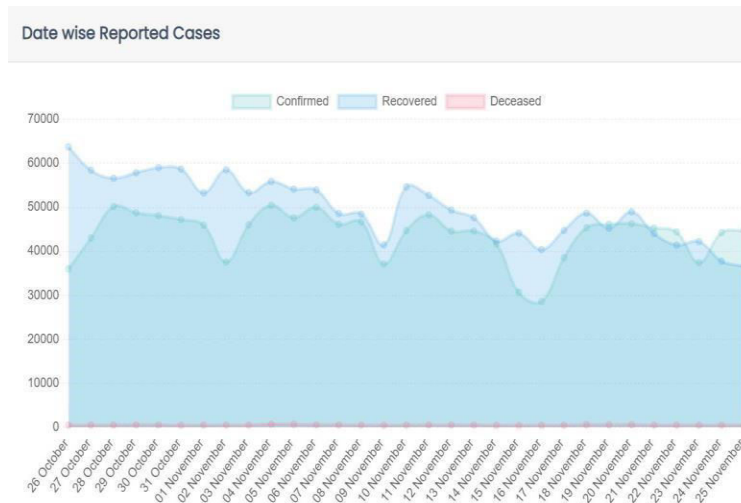


Figure:2

5. Conclusion and significance

In this paper we used Html, CSS, JavaScript and Django framework to design the web application covid-19 tracer which will show the stats for cases, deaths, recoveries, active cases and mortality rate for COVID-19 so that people can make themselves more aware and updated. It will show the data in a very sorted manner by cases, deaths and recovered cases. Also, the map visualisation feature will help people to analyse the data of every single location of India very easily. In this situation of corona this website will be very useful for people to get updated.

6. Reference

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