COVID19 Statistics Displaying Web Portal

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ABSTRACT

The recent natural event of covid has taken the globe rapidly, forcing lock-downs and straining public health care systems. This pandemic disease is thought to be an extremely infectious virus, infected people do not at first exhibit symptoms, whereas some stay symptomless. In response, several governments have shown nice interest in smart phone contact tracing apps like Aarogya setu [India] that facilitate modify the tough task of tracing all recent contacts of new known infected people. During this paper, as the primary analysis, we have collected some API's is to extract pandemic illness, covid information from several websites, and ultimately, we tend to propose a picture model, that extracts covid-19, the pandemic disease information supported daily or weekly and it is focused to show countries of the world, state, and district wise affected or active or dead rate live data automatically with the assistance of various API's.

INTRODUCTION

Data extraction is that the act or method of retrieving data from sources for more processing or data storage. The import into the intermediate extracting system is therefore sometimes followed by data transformation and presumably the addition of information before export to a different stage within the data workflow. An API is a collection of programming code that allows data transmission between one product and another. It conjointly contains the terms of this data exchange. Infecting seventy million individuals and inflicting over 1,000,000 deaths (WHO Corona virus disease (COVID-19) Dashboard, 2020), COVID-19 has verified to be a significant threat to human health, production, life, social functioning, and peacekeeping. Given the virus's profound negative effects on the planet through the numerous forced lockdowns, fighting back against it's of the foremost essential importance. Within the fight against COVID-19, massive, big technologies have competed for a crucial role in several aspects, as well as the speedy aggregation of multi-source big data, rapid visualization of epidemic data, and abstraction chase of confirmed cases, among others (Zhou et al., 2020). However, the most challenge is finding methods to regulate ancient knowledge analysis ways and improve the speed and accuracy of the data provided. Concerning the continued pandemic, we tend to face Associate in nursing "infodemic": a mass unharnesses of COVID-19 connected data creating it troublesome to navigate through and perceive. Owing to this

"infodemic", researcher's area unit given with three major problems. First, the data's convenience and presentation are usually terribly inaccurate. Second, information is sometimes fragmented into static snapshots, preventing the viewer from seeing the larger image of cases over time. Many COVID-19 chase maps presently exist; sadly, none of them can gift purposeful, time frame freelance information. Consequently, researchers cannot perform an Associate in Nursing correct and perceptive analysis of the unfold of the virus over time. Third, most knowledge visualizations area units terribly inefficient, creating it troublesome to make multiple visualizations with one model and impractical to copy by alternative researchers. Keeping each of the aforesaid problems in mind, a way to with success produce correct and perceptive visualizations was developed. To make sure accuracy among this technique, knowledge from a prestigious supply was used. To create this technique as economical as attainable, KNIME, an advanced analysis tool, was wont to produce a model file that would be emended with user parameters to simply replicate the method for multiple totally different countries. What is more, most visualizations concerning country cases of COVID-19 area unit at a national level. In alternative words, there is a scarcity of visualizations out there for regional and provincial impacts of COVID-19 among any given country, except the United States of America. Currently, there is much proof suggesting that effective maps will aid the bar of microorganisms to unfold. Given the relevancy and acceleration of COVID-19, this study targeted on making replicable and economical workflows that make visualizations to grasp the unfold of COVID-19, verify the accuracy of alternative models, promote information and knowledge sharing, produce analysis collaborations with alternative researchers, develop pilot studies on COVID-19 for future analysis, cultivate skilled data analysis. The COVID eruption was reported to initially originate from the city, China, it has been declared as a Public Health Emergency of International Concern on 30 January 2020 by UN Agency, and it unfolds to over 180 countries by the time of this paper were being composed [17]. Because the disease spreads around the globe, it is evolved into a worldwide pandemic, endangering the state of world public health, and changing into a significant threat to the worldwide community. To combat and forestall the unfold of the disease, all people ought to be intelligent of the speedily dynamical state of COVID. Within the endeavor of accomplishing this objective, a covid period analytical tracker has been designed to supply the newest standing of the disease and relevant analytical insights. Our covid tracker is meant to cater to the general audience whereas not advanced math ability with real-time data. It aims to talk insights through varied straightforward and cryptic data visualizations that square measure supported by reliable data sources. Covid shook up the roots of the planet. India was the foremost appalled of all the countries of the planet, as it was the foremost populated and underdeveloped country. So, it is necessary to make awareness concerning the wide spread of the disease. The covid tracker helps to know the results of covid around the world through tabular and graph illustration. It provides elaborate information on each country on the planet and additionally information on all states of India with conjointly every district enclosed.

RELATED STUDY

Angular js, firebase, API for the world and India, graph Plotting for visualizing the covid data from the API. The world-wise data and India's data will be viewed in tabular format. The whole application is developed in Angular js and deployed on the worldwide internet through netlify. The data we to get through the API are from covid19india.org and corona. imao. ninja. we get the cases, todayCases, deaths, todayDeaths, recovered, active, critical, cases Per One Million, deaths Per One Million, tests, testsPerOneMillion from the API these data are updated each 24 hours. The data from the API will be used to produce a graph to form it to make to know. There is additionally a chatbot, that helps by giving covid info and self-analysis to make the user perceive things regarding covid.

A.Web Data Extraction, Applications And Techniques:

In this paper, The History of data Extraction is explained alongside primitive techniques. Web Data Extraction is a vital downside that has been studied by suggests that of various scientific tools and during a broad 5 vary in applications. Several approaches to extracting data from the net are designed to resolve specific issues and operate in ad-hoc domains. Internet data Extraction systems square measure a broad

category of package applications targeting extracting data from internet sources. Alternative approaches, instead, heavily utilize techniques and algorithms developed inside the sector of data Extraction. The kinds of data extraction with explaining. The data extraction is explained at the side of the real-time use case [10].

B. An Analysis Of Public REST Web Services API's:

This paper self-addressed completely different use cases at the side of along with and implementation of API. Businesses are progressively deploying their services on the net, within the kind of net applications, SOAP services, message-based services, and additional recently, REST services. Though the movement towards REST is widely known, there is not a lot of concrete info relating to the technical options getting used within the field, like typical data formats, however, HTTP verbs are getting used or typical URI structures. Our system tends to analyze these five hundred general APIs for key technical options, degree of compliance with REST architecture, and adherence to best practices. They tend to determine several trends, but, at an identical time, high diversity in services, as well as variations in adherence to best practices, with solely zero. Our results will facilitate practitioners to evolve pointers and standards for planning higher quality services and conjointly perceive deficiencies in presently deployed services. Researchers may enjoy the identification of key analysis areas, causative to the preparation of additional reliable services [18].

C. Methodology For The Implementation Of Virtual Assistants For Education Using Google Dialogflow:

This paper is based on the operating principles and functions of google dialog flow. They tend to develop a virtual assistant that enables students to access interactive content custom-made for an introductory undergraduate course on AI. This chatbot is a very positioned ready to point out answers to commonly asked queries in a graded structured manner, leading students by either voice, text, or tactile input to the content that higher solves their queries and doubts. It

had been developed using Google Dialogflow as a simple way to generate and train a natural language model. Another convenience of this platform is its

ability to gather usage data that are potentially helpful for lecturers as learning indicators. At the instant, many articles, news, and blogs are writing concerning the potential, implementation, and impact chatbots normally have contexts, but there is very little to no literature proposing a strategy to breed them for academic functions. Therein respect, they developed four main classes as a generic structure after all content and centered on fast implementation, simple change, and generalization. The ultimate product received a general approbation of the scholars due to its accessibility and well-structured data [19].

D. Data Mining:

Web Data Mining Techniques, Tools and Algorithm In this paper, the conception of data Mining is explained with its sorts besides the working rule. Web data mining became a simple and necessary platform for the retrieval of helpful info. Users like the Worldwide internet additional to transfer and transfer knowledge. With the increasing growth of data over the web, it's obtaining tough and time 7 overwhelming for locating informative data and patterns. Creating by removal knowledgeable and user queried info from unstructured and inconsistent knowledge over the net is not a simple task to perform. Completely different mining techniques square measure want to fetch relevant info from the internet (hyperlinks, contents, internet usage logs). Internet data processing may be a sub-discipline of data mining that in the main deals with the internet. Internet data processing is split into 3 completely different types: internet structure, website, and internet usage mining. Of these sorts used completely different techniques, tools, approaches, algorithms to discover info from vast bulks of knowledge over the net [15].

E. Data Visualization:

This paper focuses on data visualization with techniques to implement graphs and charts for visualizing the information. Knowledge data involves presenting data in graphical or pictorial kind that makes the data simple to grasp. It helps to clarify facts and verify courses of action. Data visualization is additionally considered info mental image or scientific mental image. People, in general, have continuously used visualizations to create messages or info last in

time. What cannot be touched, smelled, or tasted are often described visually. It will profit any field of study that needs innovative ways that of presenting giant, complicated info. The appearance of lighting tricks has formed trendy visualization [21].

F. Artificial Intelligence:

A modern approach addresses the ways in which to create and implement AI primarily based models. Authors mentioned a few of the foremost necessary aspects related to AI during which it will facilitate a higher understanding of Artificial Intelligent and each its benefits and downsides to be able to shield ourselves from the future technological trend. They also will discuss several about the algorithms employed in AI systems. AI these days is being enforced in nearly every field of study through many models like SVM and ANN. They should always be able to proceed with knowing and understanding the results of each technological trend. They tend to show within the AI revelation era and, therefore they should always adapt to this transformation and welcome it too by grasp AI and moving toward an improved society [20].

SCRAPING

Web scraping or harvesting or data extraction is a process of extracting content and entire data from a website which we mentioned in a program. It results the replication of entire website content. Based on the study, web scraping consists of functions like some importing concepts of XML, HTML, FEED and DATA in the case of google sheets. And it has some plugins like NodeJs and PhantomJS is to collect and parsing. This web scraping main aim is to automate the process of continuous copying and pasting data from various websites.

OCTOPARSE is a web scraper method some firms utilized for COVID based web scraping. Commonly used websites are, covidindia.org, oneindia.com, mygov.in to extract covid daily statistics. Web scraps are parsehub, scrapy, octoparse, scraperAPI, Mozenda.

A primer evaluation done in site scraping (collecting or hacking google by site scraping, only for research evaluation) is mentioned below,

www.google.com

site: <web address> "gmail.com" OR "yahoo.com"

Copy all results and paste those results to email extractor [10] input field and press Extract button to get all the mail ids in output field.
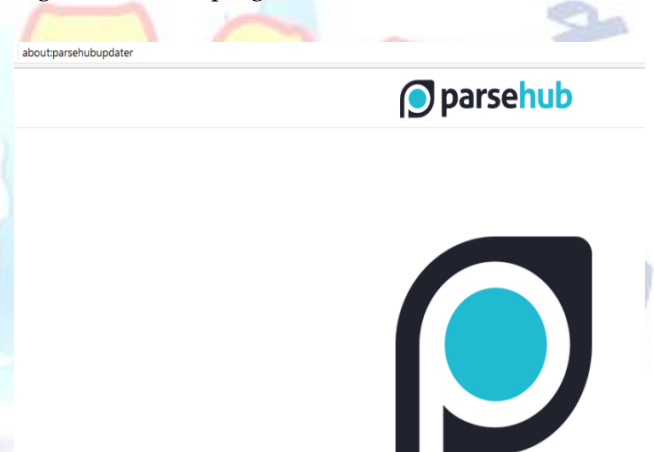

Fig. 3.1: Site Scraping [10]

Fig. 3.2: ParseHub[11]

An open source and collaborative framework for extracting the data you need from websites. In a fast, simple, yet extensible way.
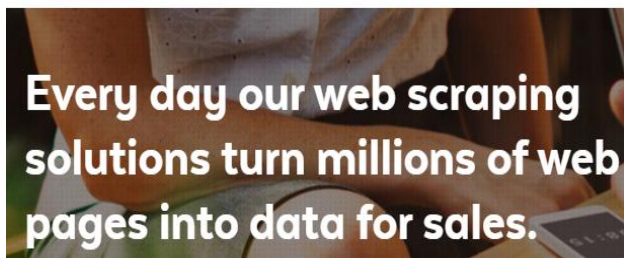
Fig. 3.3: Scrapy [12]
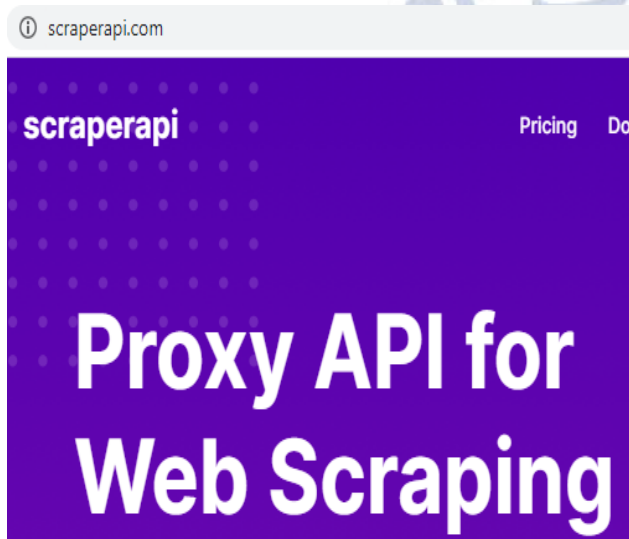
Fig. 3.4: Mozenda [13]

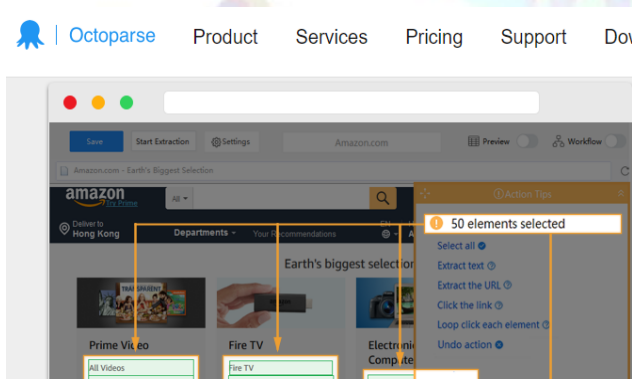Fig. 3.5: Scraper API [14]

Fig. 3.6: Octoparse [15]

PROPOSED SYSTEM

The covid tracker uses a prime API that is updated frequently. It shows all the necessary covid details in tabular format and also the required details in graphical illustration, which is simple to grasp. Most of the option and data that are out there in the covid tracker is straightforward to use and to perceive. It additionally offers elaborate data on the desired details. It is additionally integrated with a chatbot that offers covid info and will do the self-analysis to the user making it quite interactive.

MODULE DESCRIPTION

A Web API is employed to send your request for that keyword to an internet server, and reciprocally, the server provides reviews or comments to you in an exceeding data format. Raw format knowledge does not essentially look easy like spreadsheet rows and columns. An application programming interface (API) may be a set of software system definitions, protocols, and tools for building an application package. Generally, terms, it's a group of clearly outlined ways of communication between numerous package elements. Our APIs are from https://corona.lmao.ninja/v2/countriesand https://api.covid19-api.com/country/ that extract data in JSON (JavaScript Object Notation) format. JSON is that the language of API's. JSON is the procedure for writing in code knowledge structures that ensure that they're simply legible by machines. JSON is that the primary format during which knowledge is passed back and forth to API's, and most API servers can send their responses in JSON format.

- The covid tracker can be accessed through this link https://covid-hub.netlify.app/.
- The first thing it shows is the home page, where the users can select the login/signup option. While new users can, signup and previous users will login.
- The data are validated when signing up and are evaluated during login.
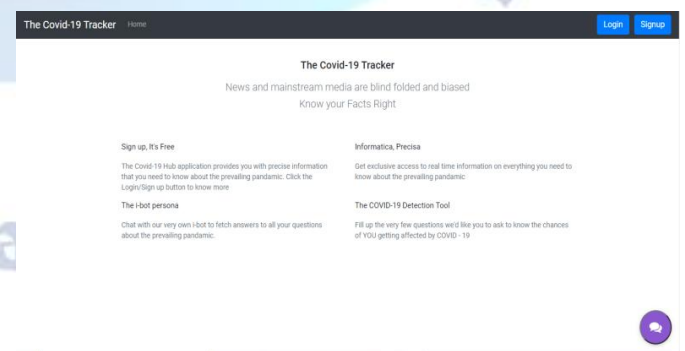

Fig. 5.2: Sign Up Page

Fig. 5.2: Sign Up Page

Fig. 5.3: Login Page

- After login, the user can access the dashboard and the intercountry data from the home page.

Figure 5.4: Home Page of web portal

The Dashboard consists of the world covid data in tabular format, where the user may also choose the specific country from the drop-down menu to see the graphical visualization of the chosen country.

Fig. 5.5: Details of COVID Tracker

Fig. 5.6: Dashboard Selection Of Countries
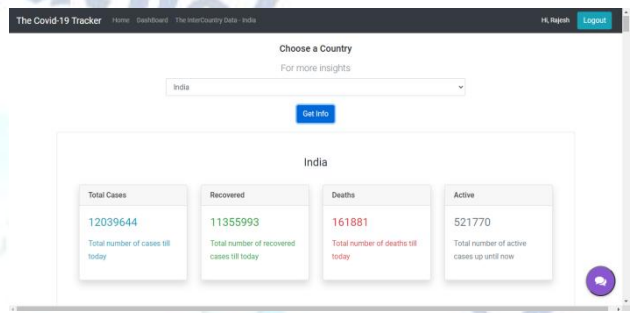
Fig. 5.7: Data Visualization of country wise total report
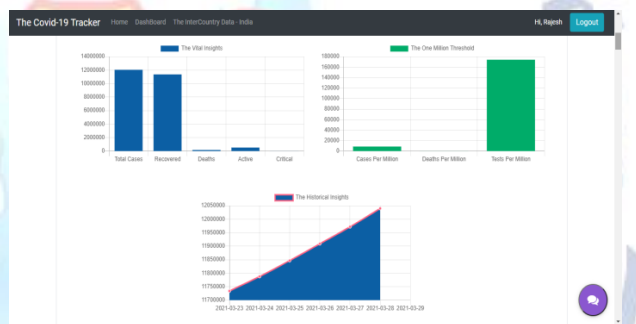

Fig. 5.8: Data analysis

- The inter-country data consist of all the states of India in the drop-down menu, Where the user can select the specific state and it will show district-wise data of that state.

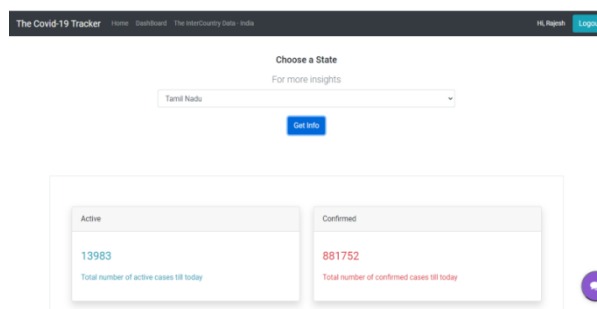Fig. 5.9: Inter-Country Data Selection

Fig. 5.10: Data Visualization Active &Confirmed Patient's data

Fig 5.11: Total Report Data Visualization

- There is an icon on the bottom right corner, which is a chatbot. This chatbot will offer basic covid info and can also do self-analysis for the user.
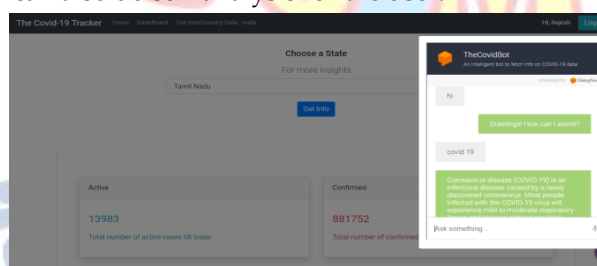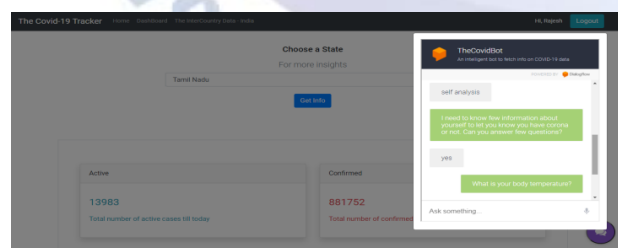

Fig. 5.12: Chatbot Framework

Fig. 5.13: Chatbot Self-Analysis

CONCLUSION

The covid tracker aimed to supply a user-friendly dashboard that provides real-time data regarding covid around the world and India. This covid tracker provides data in Tabular format and standing data within the style of interactive graphs. The awareness is additionally created amongst the guests using the messages displayed within the website. The covid tracker can display state, district-wise live covid data of India and conjointly covid data of countries automatically with the assistance of 2 totally different APIs. There is conjointly an artificial intelligence-based mostly chatbot that guides individuals to understand a lot of details relating to this pandemic disease. In future, we add district wise information with daily and weekly report.

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