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Containment Zone Alerting Application

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ABSTRACT: The program identifies the Delhi Containment Zones, offers questionnaire-based Covid-19 self-assessment exams, and gives a list of health services relevant to Covid-19. The software furthermore offers a heatmap of people living under home quarantine in Himachal Pradesh (Covid Locator 2020). The app offers Covid-19 data, emergency contact information, government-issued information on preventative care, and suggestions. Contacts are requested to keep an eye on quarantine circumstances if the patient brought to the hospital is later discovered to have a positive test (app) The software was created to keep track of Surat residents who were placed under house quarantine.

KEYWORDS: Geo-fence, Fire base, DB2

I. INTRODUCTION

One of those businesses, Move In Sync, created the COVID-19 Containment Zone Tracker to let people know whether places surrounding them are confined zones for the people who reside there. To map local Covid-19 transmissions and stop the illness from spreading, containment zones are established. A territory being declared a containment zone means that additional security measures are required to restrict the spread of the deadly virus inside the local population.

As the number of cases has grown, containment zones have generally shrunk: from entire neighbourhoods to communities or neighbourhoods, to streets and alleyways, to particular buildings, and finally to specific floors alone. The county office often employs

II. OBJECTIVE

By continually tracking a single point, this app aims to notify users to the enclosed sections of a given area and provide information about such places. The proposed system refreshes zones that are designated as containing regions in Google Maps, notifies users when they reach certain zones, and adds their international Mobile Equipment Identity (IMEI) numbers to an online database.

When a geofence is set up, the Android app alerts users if they enter confinement zones or violate their boundaries. Users may also get notifications if they remain inside containment zones. Once Google Maps has been loaded and the confinement zones and user location have been entered, by clicking the button, the user can apply Geofences to the 100 containments.

The suggested system refreshes confinement zones that are shown on Google Maps, alerts users when they enter them, and adds the IMEI (International Mobile Equipment Identity) numbers of those users to an online database.

III. PROPOSED SYSTEM

According to Andrew Cuomo, the National Guard would be utilized inside the confinement area to provide food to families and assist in cleaning up public areas. According to the governor, the containment zone's schools and other meeting spots would be shuttered for two weeks. A coronavirus containment area will be set up in the city, Andrew Cuomo declared, and certain schools will be shuttered. The National Guard will also be called in.

Unless otherwise placed into quarantine, those residing in a containment zone will be permitted to leave their homes and communities under the proposal. In addition to updating Google Maps locations to be designated as confinement zones, this suggested system also maintains users' International Mobile Equipment Identity (IMEI) numbers in an online database and informs them if they visit certain areas. Users are urged to have the most recent version of the programme installed on their mobile phones because the application is frequently updated with new upgrades and features (RajCovidInfo 2020). Users

may view Covid hotspots and data on Covid-19 with this app, which also offers statistics on the number of Covid-19 cases in Himachal Pradesh.

The application offers a list of health services linked to COVID-19, a description of Delhi's containment zones, and a questionnaire-based COVID-19 Self-assessment exam. Users that test positive for Covid-19 during the user trace download both their home address and the location of their locally stored trace. Given the daily rise in the number of COVID-19 patients, it is certain that tracked location data would grow significantly.

MERITS

* This app's goal is to raise people's awareness of the areas that serve as deterrents by alerting them to their whereabouts and tracking their movements over time.
* In addition to updating areas in Google Maps that are designated as containing zones, this proposed system also notifies users when they enter those areas, logs their international Mobile Equipment Identity (IMEI) numbers into an online database, and updates areas in Google Maps that are designated as containing zones.
* An ML model used in the detection can identify the existence of a virus in a person, and it offers a strong stalking system for finding contacts.
* A territory being declared a containment area means that additional security measures must be put in place to restrict the spread of a dangerous virus within the local population.
* To stop the spread of illness, authorities are establishing micro-containment zones, including those with only one or two homes. The isolation has led to widespread migration, particularly from urban to rural regions, which has spread COVID-19 instead of limiting it.

DE-MERITS

* Contacts are asked to keep an eye on quarantine if a patient admitted to the hospital is discovered to have the disease (app) The Surat, India, house of a person under quarantine will be monitored using the app. It defines the quarantine zones in Delhi, describes the health services relevant to Covid-19, and offers questionnaire-based Covid-19 self-assessment examinations. The app is now being tested in the Mahadevapura Zones of Containment with the goal of expeditiously resolving concerns and effectively monitoring surveillance measures.
* The suggested system refreshes Google Maps locations that are designated as confinement zones, notifies users when they enter such areas, and adds the IMEI (International Mobile Equipment Identity) numbers of those individuals to an online database. It is suggested to use a geo-COVID strategy that is based on the geofence framework to manage and track people's movements.
* Countries like South Korea have demonstrated that digital contact tracking may be effective at containing a virus, but at a cost to user privacy, as everyone can see in the disadvantages section.

IV. WORKING DIAGRAM

The Location Manager uses distance-between algorithms to calculate the distance between a user and each confined region (Android Developer — Location 2020). After setting up a geofence, a user may get alerts when they reach a confinement zone, as seen in Figure. The user may click the button to add geofences to the 100 closest confinement zones once Google Maps has loaded, the containment zones have been filled in, and the user's location has been entered.
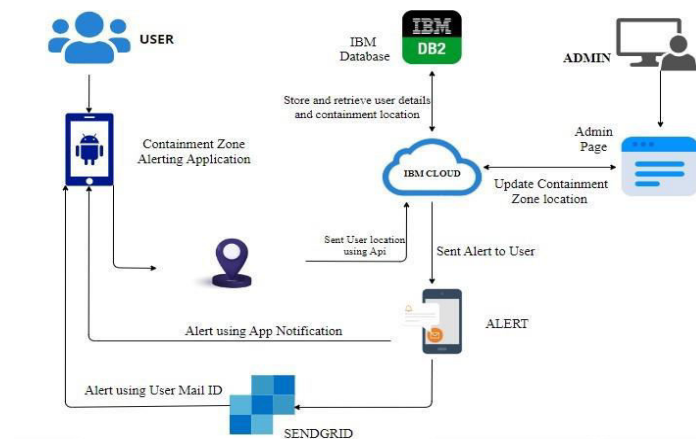

Fig:1 Data Flow Diagram

Additionally, the Android application alerts users when they enter or leave confinement zones (Fig. The programme lists the Delhi containment zones, details the health services associated to Covid-19, and offers questionnaire-based Covid-19 self-assessment exams. The software furthermore offers a heatmap of people living under home quarantine in Himachal Pradesh (Covid Locator 2020). The app offers Covid-19 data, emergency contact information, government-issued information on preventative care, and suggestions.

The application's purpose is to inform users about official COVID-19 control (COVID-19 care Tamil Nadu-(official)2020) updates and best practises. The app displays the COVID-19 cases by Tamil Nadu districts. After testing positive for COVID-19 during user tracking, users download their home addresses along with the location of tracking that was locally saved. Local device storage, which is only accessible by the user, is where locations are kept before the user uploads all of their locations and tests positive for COVID-19.

In addition to updating confinement zones in Google Maps and warning users when they enter them, the proposed system also collects users' International Mobile Equipment Identity (IMEI) numbers and keeps them in an online database. People in a confinement zone may be monitored in real time using this suggested technology, which also protects their safety and privacy. Through the use of an ML model, the detection can identify whether a person has a virus inside of them and offers a robust tracking mechanism for locating contacts.

We have implemented an automatic text detection technique from an image for Inpainting. Our algorithm successfully detects the text region from the image which consists of mixed text-picture-graphic regions. We have applied our algorithm on many images and found that it successfully detects the text region.

V. IMPLEMENTATION

By continually tracking a single point, this app aims to notify users to the enclosed sections of a given area and provide information about such places. The proposed system refreshes zones that are designated as containing regions in Google Maps, notifies users when they reach certain zones, and adds their international Mobile Equipment Identity (IMEI) numbers to an online database. With set my position enabled, the Google map displays all confinement areas in West Bengal (Google Maps API).

The user may click a button to add geofences to the 100 closest confinement zones when the Google map has loaded, populated with the containment zones and the user's position. Location Manager's distance-between algorithms are used to calculate the separation between each containment zone and the user (Android Developers-Location 2020). Additionally, the Android application alerts the user if they leave or enter a confinement zone.

The programme lists the Delhi containment zones, details the health services associated to Covid-19, and offers questionnaire-based Covid-19 self-assessment exams. The software furthermore offers a heatmap of people living under home quarantine in Himachal Pradesh (Covid Locator 2020). The app offers Covid-19 data, emergency contact information, government-issued information on preventative care, and suggestions. The application's purpose is to inform users about official COVID-19 control (COVID-19 care Tamil Nadu-(official) 2020) updates and best practices. The app displays the COVID-19 cases by Tamil Nadu districts.

In order to manage and track people's movements using GPS coordinates, a geo-COVID strategy that is based on the geo-fence architecture is presented. To improve security restrictions, writers in developed a system for tracking the COVID-19 zones. To identify places that need baseline intervention and to centrally monitor COVID-19, containment zones are crucial.

VI. RESULT

In, authors presented a smartphone app for managing COVID-19 dissemination that uses geofencing and machine learning algorithms for detection, monitoring, and alerting. According to official data, the increase in COVID-19 instances caused the number of confinement zones to increase by over 70%, from 190 on June 17 to 322 on June 24. Since November, micro-containment has been reinstituted. New given that COVID-19 instances are on the rise, particularly in Gujarat and Ahmedabad. The emergence of multiple fresh covid-19-positive individuals in the United States without a known exposure or travel history indicates that SARS-CoV-2 transmission has started in areas outside of hospital containment zones.
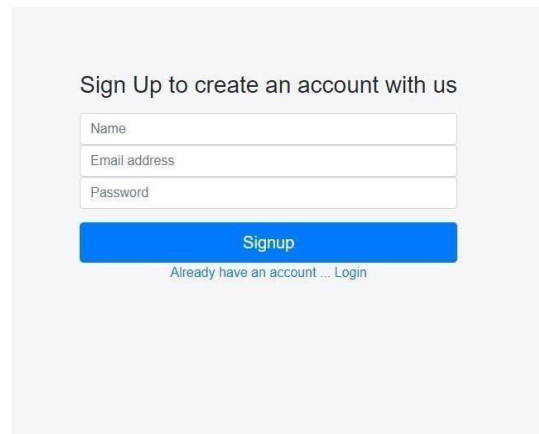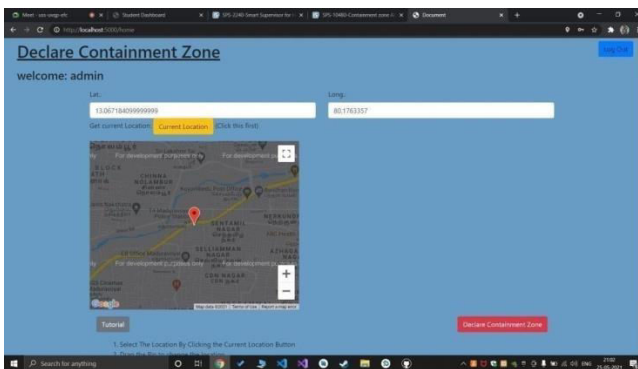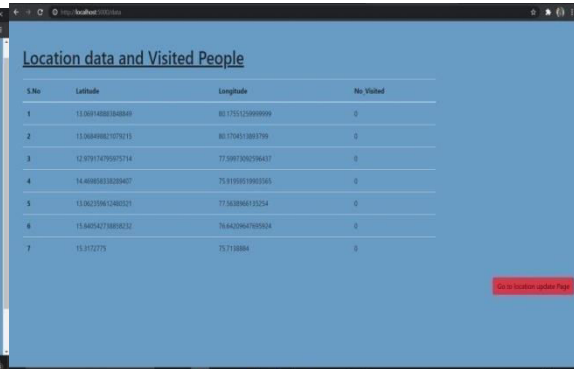
Fig:2 Registration FormFig:3Login Page

Fig:4Add Containment Zone   Fig:5Display the Containment Zone Updation Data
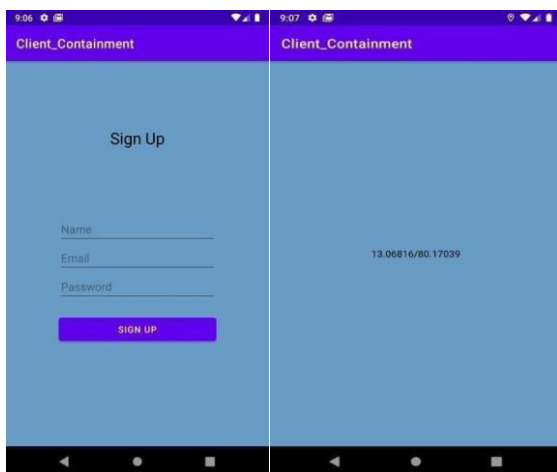

Fig:6 : User Signup and Current Latitude in Android Application

Fig 7: Notify the Containment Zone to the User

VI. CONCLUSION

The programme identifies the Delhi Containment Zones, offers questionnaire-based Covid-19 self-assessment exams, and gives a list of health services relevant to Covid-19. The software furthermore offers a heatmap of people living under home quarantine in Himachal Pradesh (Covid Locator 2020). The app offers Covid-19 data, emergency contact information, government-issued information on preventative care, and suggestions. Contacts are requested to keep an eye on quarantine circumstances if the patient brought to the hospital is later discovered to have a positive test (app) The software was created to keep track of Surat residents who were placed under house quarantine.

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