

Literature Survey - Team ID: PNT2022TMID10417

Name of the paper:

Development of An Android Application for Viewing Covid-19 Containment Zones and Monitoring Violators Who are Trespassing into It Using Firebase and Geofencing.

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Published Online:

1 July 2020

Topic:

Containment Zone Alerting Application

Theme:

Our theme of the project is to provide information about containment zones in a particular region by alerting people, by continuously monitoring an individual's location. Key benefits of the application are monitoring people's activity and alerting them of their safety movements.

Overall inference:

The country has created containment zones throughout the cities wherever Covid-19 cases have been reported, to prevent further spread of the virus. These containment zones have been kept isolated from the outside public to ensure no contamination occurs outside. Though these containment zones are guarded by policemen, still there remains a chance that people might unknowingly step into them. In this situation where people can move in the location of the containment zones can help them bypass and avoid these zones and thereby reduce the chance of

community transmission to the city, these containment zones pose a risk of infection to these city dwellers.

Therefore, informing people about the location of the containment zones can help them bypass and avoid these zones and thereby reduce the chance of community transmission. So, our aim is to develop an application that tracks the user's location and provides a notification alert if the user has entered a containment zone. The application provides daily Covid-19 case statistics to the users to keep them updated.

Most of the states of our country have their own apps with specific features and functionality to help their citizens to stop COVID-19 spread, get medical assistance during a crisis, create awareness, and understand safety precautions.

The study shows that there are a limited number of apps that show the COVID-19 containment zones in the country or state and out of these none has the functionality of notifying and alerting the user when they have entered a containment zone.

The application shows the location of the containment zones to the users. It also notifies the user when he or she trespasses the geofence of a containment zone or stays in the containment zones.

Name of the paper:

Mobile Health Apps That Help With COVID-19 Management:
Scoping Review

Author:

Tracie Risling and Gunther Eysenbach

Published Online:

Aug 2020

Topic:

COVID-19 Management Application

Theme:

Our theme is to scope the evidence base on apps that were developed in response to COVID-19.

Overall inference:

Mobile health (mHealth) apps have played an important role in mitigating the coronavirus disease (COVID-19) response. However, there is no resource that provides a holistic picture of the available mHealth apps that have been developed to combat this pandemic

This review identifies that the majority of COVID-19 apps were for contact tracing and symptom monitoring. However, these apps are effective only if taken up by the community. The sharing of good practices across different countries can enable governments to learn from each other and develop effective strategies to combat and manage this pandemic.

Name of the paper:

COVID19-Tracker: A shiny app to produce to produce comprehensive data visualization for SARS-CoV-2 epidemic in Spain.

Author:

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Published Online:

April 2020

Topic:

Containment Zone Alerting Application

Theme:

Our theme of the project is to provide information about containment zones in a particular region by alerting people, by continuously monitoring an individual's location. Key benefits of the application are monitoring people's activity and alerting them of their safety movements.

Overall inference:

Data visualization is an important tool for exploring and communicating findings in medical research, and specially in epidemiological surveillance.

The COVID19-Tracker app systematically produces daily updated data visualization and analysis of SARS-CoV2 epidemic in Spain.

It collects automatically daily data on COVID-19 diagnosed cases, intensive care unit admissions, and mortality, from February 24th, 2020 onwards. Two applications have already been developed,

- 1) To analyse data trends and estimating short-term projections and
- 2) To assess the effect of the lockdown on the trend of incident data.

The plan is to improve the app by uploading shortly new applications for data visualization and analysis, which may help for a better understanding of the SARS-CoV-2 epidemic data in Spain.

Data visualization is an important tool for exploring and communicating findings in medical research, and specially in epidemiological surveillance. It can help researchers and policy makers to identify and understand trends that could be overlooked if the data were reviewed in tabular form. We have developed a Shiny app allows users to evaluate daily time-series data from a statistical standpoint. The COVID19-Tracker app systematically produces daily updated data visualization and analysis of SARS-CoV-2 epidemic data in Spain. It is easy to use and fills a role in the tool space for visualization, analysis and exploration of epidemiological data during this particular scenario.

Name of the project:

Containment Plan Novel Coronavirus Disease 2019 (COVID 19)

Author:

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ABSTRACT:

Coronaviruses are large group of viruses that cause illness in humans and animals. Rarely, animal coronaviruses can evolve and infect people and then spread between people such as has been seen with MERS and SARS. Although most human coronavirus infections are mild, the epidemics of the severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV), have caused more than 10,000 cumulative cases in the past two decades, with mortality rates of 10% for SARSCOV and for MERS-CoV.

Global Scenario As on 14th May, 2020, COVID-19 confirmed cases are being reported from 214 countries/territories/areas. A total of 42,48,389 laboratory confirmed cases and 2,92,046 deaths have been reported from globally. Focus of outbreak that was initially China, has now shifted to European region and United States of America.

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Local transmission of COVID-2019 disease:

The strategy will remain the same as explained in para 2.1 as above. In addition, cluster containment strategy will be initiated with:

- Active surveillance in containment zone with contact tracing within and outside the containment zone.

- Expanding laboratory capacity for testing all suspect samples, close contacts, ILI and SARI

- Establishing surge capacities for isolating all suspect / confirmed cases for clinical management.

- Implementing social distancing measures.

- Intensive risk communication.

Deployment of Rapid Response Teams (RRT) State will deploy its state RRT and district RRT teams to undertake mapping of cases and contacts so as to delineate the containment and buffer zones.

Emergency Medical Relief (EMR) division, Ministry of Health and Family Welfare may deploy the Central Rapid Response Team (RRT) to support and advice the State.