Ideation Phase

Literature Survey

Date	19 September 2022
Team ID	PNT2022TMID48366
Project Name	Containment Zone Alerting Application
Maximum Marks	4 Marks

Paper-1

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

-(Ranajoy Mallik, Amlan Protim Hazarika, Sudarshana Ghosh Dastidar , Dilip Sing , Rajib Bandyopadhyay)

Abstract:

The World Health Organization has declared the outbreak of the novel corona virus, Covid-19 as pandemic across the world. With its alarming surge of affected cases throughout the world, lockdown, and awareness (social distancing, use of masks etc.) among people are found to be the only means for restricting the community transmission. In a densely populated country like India, it is very difficult to prevent the community transmission even during lockdown without social awareness and precautionary measures taken by the people. Recently, several containment zones had been identified throughout the country and divided into red, orange and green zones, respectively. The red zones indicate the infection hotspots, orange zones denote some infection and green zones indicate an area with no infection. This paper mainly focuses on development of an Android application which can inform people of the Covid-19 containment zones and prevent trespassing into these zones. This Android application updates the locations of the areas in a Google map which are identified to be the containment zones. The application also notifies the users if they have entered a containment zone and uploads the user's IMEI number to the online database. To achieve all these functionalities, many tools, and APIs from Google like Firebase and Geo fencing API are used in this application. Therefore, this application can be used as a tool for creating further social awareness about the arising need of precautionary measures to be taken by the people of India.

Reference: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7328652/

Paper-2

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

-(Hanson John Leon Singh , Danielle Couch , Kevin Yap)

Abstract:

Mobile health (m Health) apps have played an important role in mitigating the corona virus disease (COVID-19) response. However, there is no resource that provides a holistic picture of the available m Health apps that have been developed to combat this pandemic. Our aim is to scope the evidence base on apps that were developed in response to COVID-19.

Reference: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7467120/

Paper-3

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

-(Aurelio Tobías, Joan Valls, Pau Satorra, Cristian Tebe)

Abstract:

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-CoV-2 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 analyze data trends and estimating short-term projections; and 2) To assess the effect of the lockdown on the trend of incident data. We are currently planning 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.

Reference: https://www.medrxiv.org/content/10.1101/2020.04.01.20049684v1

Paper-4

Mobile Geo Fencing Triggers for Alerting Entries Into COVID-19 Containment Zones using IOT.

- (Ramana Rao, Adilakshmi, Venkatesh)

Abstract:

In a thickly populated nation like India, it is hard to forecast community transmission of COVID-19. Hence, a number of containment zones had been recognized all over the country separated into red, orange, and green zones, individually. People are restricted to move into these containment zones. This chapter focuses on informing the public about the containment zone when they are in travel and also sends an alert to the police when a person enters the containment zone without permission using the containment zone alert system. This chapter suggests a containment zone alert system by means of geo-fencing technology to identify the movement of public, deliver info about the danger to the public in travel and also send an alert to the police when there is an entry or exit detected in the containment zone by the use of location-based services (LBS). By creating a fence virtually called geo-fence at the containment zones established based on the government info, this system monitors public movements like entry and exit to fence.

Reference: https://www.semanticscholar.org/paper/Mobile-Geo-Fencing-Triggers-for-Alerting-Entries-Rao-Adilakshmi/c1925d5f9c97a42523e7eaf76a35d2c5eeac4ca1