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Covid Care

Senior Capstone (CS 4366) - Project one

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**Introduction**

      An outbreak of the Covid-19 (2019 coronavirus disease) has spread worldwide. By Jan 30, 2021, total cases of 102,713,851 had been reported to WHO which includes a total death toll of 2,218,137 and number of recovered cases: 74,422,481. According to the Centers for Disease Control and Prevention, Covid-19 has a wide range of symptoms reported ranging from mild symptoms to severe illness. Covid-19 doesn’t have specific symptoms which can help to differentiate whether it is a deadly virus or other diseases in the human body. It's been more than a year that we are facing the situation of Covid-19 but the number of cases never seems to go down. Around the world, many governments have tried different protocols hoping to stop the number of covid cases.  As of Jan 29, the total number of new cases of covid-19 is 589,242 worldwide which is enough to show that whatever the government and people did to stop the increasing number of cases is not working the way it is supposed to be. Since it is a communicable disease, it is very easy to spread from one person to another person. if person A is affected with Covid-19 and if person B is nearby person A then there is a high chance of person B getting affected of Covid-19 too. So, we aim to develop a mobile application which will be very effective for both covid-19 patients and covid-19 unaffected persons. Our application will not only alert the people who are around covid-19 patients but also provide users many main features like real time data of covid-19, recently exposed areas, creating appointments for vaccination, feedback of other people on vaccination and many more.

**Motivation**

The primary reason that caught our attention towards creating this application that helps people be aware of the real time exposed location. Many people in the world are still not able to access the information handy and are not being able to get themselves in a safer zone causing more people to get affected by the virus. In addition, many of the websites are broadcasting information related to COVID-19 which are less accurate and that might not relate to the area that a person is living in. People around the world are lacking safety measures as the virus is not taken under control for more than a year and many are losing concerns as they have learnt to live with it rather than getting information about the virus. On the other hand, people are scared to even get the vaccination assuming that the virus in turn gets them into more troublesome consequences in the future. Another reason that we were motivated to do this project is that there have been a lot of changes of hours in the business operations and the people are not getting updated hours resulting in difficulty in using the needed services form the businesses at the time they need resulting in more loss of time and frustrations.

* According to the US census Bureau survey data, only 51% of the adults indicated that they would receive the COVID-19 vaccine and the rest of the 49% of the people showed concern about the consequences of this new vaccine.

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**Functionality and Features**

The primary design of our project is to make an application which is accessible to the users residing anywhere in the world where one can access a map that provides them with a real time risk zone for COVID-19 such that one can notice whether they are in a riskier zone or safer zone. we will be doing so using google map API. This will help the user take preventive measures to make oneself safer from the virus. Now, it is not necessarily that a user has to open the app every time to see the status of how risky the place they are hanging out at, but we will have an alert system in our application via Bluetooth such that if you have a Bluetooth in your device and a stable internet connection, notification can be sent to your personal device to make yourself aware about the place you are in. This is one of the most effective alert systems that we have taken into consideration, however, this application will be made compatible in the android devices and the user with an android device will have access to using this application for the time being. The other interesting feature that our application will have is that it allows the business companies to create their profile where they can update their hours of operation. Besides, the companies will update any change in the way of the operation of the business, they will have it updated so that the user can check the processes from home and decide if it is efficient to drive to the location at the given time or not to get the service needed. Also, Pharmacy and Hospital can update several helpful information such as the availability of vaccines in their locations and if they can take any appointments from the people wanting to get vaccinated.  Each person tested can update the result in the application so that the other user using the application can be notified if he is in closer contact with the person tested positive and be aware of the situation to get himself in a safer zone, however, a person updating his test result in the application will remain anonymous such that other person in the closer zone cannot notice the detail of the person and be notified about the situation just through the feature that mentions that a person is in a risky zone. The application will also have the feature that updates it every thirty minutes automatically or when the user wants to update it such that the users are provided with updated information via our application. Last but definitely not the least, our application provides users with a feature that one can report health progress in the application. User can provide review of the service he/she got at certain location, his own health status changes over the time before and after being vaccinated by virtue of which the other users willing to get vaccinated at certain location or also the person who got vaccinated or feels like he needs to get checkup can notice what to expect throughout the process in his location and later provide reviews with his own experience.

**Expected Outcomes of our project are as follows:**

1. Easy to track information compared to those of other sources upon using our developed application
2. Users will get to get accurate information about rising cases, deaths, high-risk areas, vaccinations and also, they will be allowed to discuss their opinions using this platform to create awareness around them
3. After being vaccinated, people can express their condition and health progress and write review in the app to help others understand how the vaccination is having effects on people’s lives
4. Users will be able to retrieve information about business company’s accurate hours of operation and the structures of their operation in relation to COVID-19 situation that the users will save time on the related business following safety measures and guidelines
5. People can avoid the high-risk areas using the map provided in the application to avoid having themselves exposed to the virus

**WORKS CITED**

1. Coronavirus Cases: (n.d.). Retrieved January 30, 2021, from<https://www.worldometers.info/coronavirus/>

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