TRACE COVID-19

Heading / Description :

Create Corona Hotspots using travel history of infected patients in google maps along with medical resources / testing centres nearby. This will give possible hotspots or regions of future suspected cases to focus on and time to prepare medical resources in advance for the coming catastrophe in that region.

People advised as suspected cases or home quarantined or was in direct touch with the infected person also need to register their travel history to get corona hotspots.

Problem or inspiration : We are getting late in gathering medical resources in specific regions on time for infected patients before we realize the sudden outbreak in those regions. Covid-19 pandemic nature of sudden rise gives no time to settle down with current resources and hospitals / medical centres get overwhelmed before realizing millions of people dying. Reacting late leave no option other than casualties.

Solution : Create Corona Hotspots using travel history of suspected people / infected patients in google maps and link it to nearby hospitals and testing centres. These probable hotspots information provide Govt./medical councils way to put mass surveillance systems to reach to infected early and preparation of ready medical resources/ventilators for the coming catastrophe in that region. We will be able to utilize medical resources / healthcare workers movement before time where the probability of getting more cases is high and under-utilized resources will become working engines to fight the pandemic. Users / general public will be able to see nearby hospitals or testing centres in range of these hotspots. This will overall reduce the sufferings and stop the community transmission as people will also avoid corona hotspot places to visit in near future until we come out of this situation. In future, google location history can also be used as a source of information to create travel history data for the suspected / infected cases.

Long term efficiency : As we all know COVID -19 is spreading roots in all countries and most countries are in lockdown or inside home advisories. During the spread or when world will start removing restrictions or lockdowns with control measures, Govt. of all countries will require mass surveillance mechanisms to implement and reach to infected and suspected cases earlier to prevent spread further as a second wave. Web app will help countries to get clear picture of where the lockdowns are still required with minimum movements as hotspots of carriers. Users will use the web app to avoid corona hotspots while travelling or on roads to prevent virus spread.

Implementation : We have created this using available data from Github covid data sources and simple form for users has been created using google places box to tag the places as travelled in last days .This way of creating travel history and running algorithm in python to create clusters where the number / probability of suspected

cases is high, we get some corona hotspots to focus on immediately. Google location history can be retrieved from users' cell phones using their google accounts with their permissions.

Problems Faced : Faced problems in integrating python and google apps engine to work on google spreadsheets as the database.

Accomplishments : We as team of two people feeling accomplished to implement this in minimum time to enhance it further now. Linked major modules together to work as app.

Learnings : We have learnt new technologies as google apps engine and working real time to get data from different sources.

What's next : As we got to know about this solution challenge last day and we are left with no time to prepare for production ready app to submit it here. We are submitting for now the abstract, till then we are trying to convert the app into github project and move it to production.