Inspiring Points Summary for All Best COVID-19 Apps

This summary is mainly coming from all excellent apps developed by COMSCI590U students, those are amazing ideas and technological points. Also, part of the points totally new ideas I come up with while checking those apps.

Platform

The best solution contains app-web support, and this will make the service easier to use. Summarize the core data in one place, and make the core functionality available on all platforms.

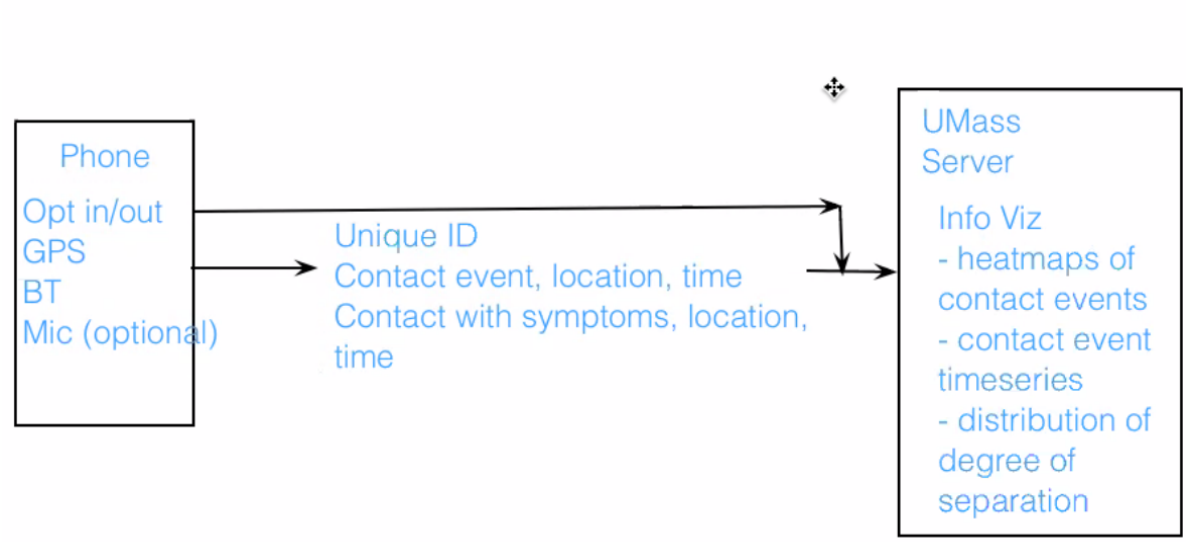
Information

- The app should contains reliable national, global and local news resource, as well as an easy-to-access interface to the crucial numbers like the confirmed number, death number and global numbers.
- Google, Facebook, Government pages related COVID-19.
- Some mental care website, especially the ones related to depression and other possible symptoms that can be caused by COVID-19 and staying at home.
- Emergency contact. Make a call/send a text message to your emergency contact or your local hospital/association.
- How many confirmed cases are around you within 10mil, 20mil, 35mil, 50mil.

Functions

- Easy login by Facebook/Google, and/or support register.
- Ability of collecting basic user profile information, especially the gender, age, weight and whether is confirmed.
- Separate the user into two groups, one is those who has already get affected and those who not. Give them different functions and use the data correspondingly.
- Collect the Wi-Fi/Bluetooth devices number around user when he/she stay in a place for a relatively long time(Like 15min).
- Allow user to set the **INDOOR DEVICE NUMBER** manually, for example, when user is living alone in his apartment, he can set the indoor device number, or indoor other human number to 0 manually.
- A service running on the background which can alert you when there are too many devices around you.
- Heatmap. Heatmap for your travel frequency, and the confirmed case risk level map. The confirmed cases risk level can be get from the local government website. Also maybe the crowd level heatmap.
- Goal setting. Like the daily total travel distance maximum, daily sports minimum, nutrition intake minimum and also the goal of the score.
- Cough detection.
- Visualization. Visualization of moving trace on the map, the score record history, device number change, the comparison between you and your friends/other users.

- Applying the **voice identification** technology. Use voice to judge how many different people are really interacting with you.
- Track whether a new device has been next to you for more than 15 min, which may means that you are having potential contact with.
- If you are confirmed, you can input your previous trips(position and the corresponding time).
- A search function for checking the risk level for a certain place/area based on how crowded it is and other information collected like whether a confirmed case has just been there. It can also refer to the local government data on the overall area risk level.



Techs

- Cough detection using deep learning algorithm on cloud or locally by analyzing microphone signal. Best using mobile networks based on local computational resources.
- Should contain a cloud database recording all of the core data collected.
- Utilizing both your data and other's data jointly, and dig out the potential of those data.
- Use services to run in the background, but also use the accelerometer to be the trigger. The service will only start recording and uploading when your phone is moving. This will save the energy and battery life greatly.

Scores

- It should take many factors into consideration, like the mobile devices around you, risk of your current location, how long you have travelled this day and where you have been, as well as those places' risk.
- Also, it should be able to confirm the position of your home and get rid of the devices which will always be around your home.
- Consider the user's gender, age, weight, height and maybe other features based on medical theories.
- Consider the completion of the **HEALTH GOAL** set. Like whether you have take the minimum sports level you set.
- Including a flexible **Self-Evaluation**. For example, if a user think he felt sick today, that might be a case.
- Including more health-related sensor data as an optional, like some phone contain the daily step number, heart rate curve(basically based on smart watch) and other data. This will be very interesting for a overall health monitoring.

- Allow competition between people, especially your friends, which may come from Facebook list or the app friends.

Other

- Modern and good-looking app UI design, such as flat design, like Ruei-Yao's app.
- App's main logic design, service design, or UX design.
- Color scheme design.
- A good name :-)

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