Advanced COVID19 Traceability in Bogota's Transportation System

MOVID19 Hackathon

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Main Goal:
To ensure public transportation stays safe and reliable through the COVID-19 outbreak

The Problem

- The COVID19 virus is a highly infectious virus that spreads from person to person or droplets that land on objects close to a person.
- Different people present different symptoms. Some might not even feel strong symptoms while spreading the virus.
- Public Transit is often a close contact activity with a higher risk of transmission
- Public Transit is an essential service, even in the middle of a pandemic, as many users need to get to their destinations to perform essential duties.

The Problem

- Due to the transmission characteristics of the virus, it is very hard to track. Only when an infected person gets a lab test do authorities start tracking everyone who might have been in contact with that person.
  - This is a very labour intensive job.
- When those at risk are found, they might already start showing symptoms, and could have already been transmitting the virus to those around them.

We asked ourselves…

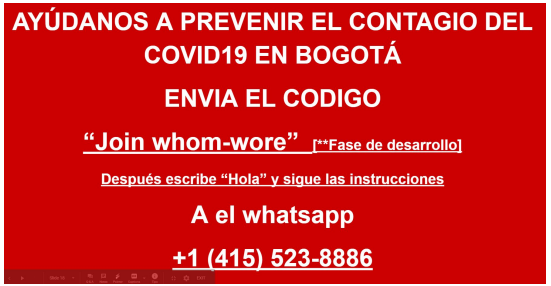
How can we get ahead of the virus?

Solution

Tracking	We've decided to create a chatbot to enable public transit users to track the individual buses they have used while commuting to their essential activities.
Prediction	In this way if one of the users tests positive to COVID19 we can notify users who were in contact with that user, in the same bus, at the same time.
Prevention	With the notification we can alert those users at risk that they should go into preventive quarantine and abstain from using the public transit system, further spreading the virus.

How does it work?

- Buses are labelled with stickers that display the bus number.
- The user gets on a bus and sends an initial message to the whatsapp number and completes the prompts for the registration.
- Then every time the user gets on a bus he/she sends a whatsapp message with the bus ID
- More users are encouraged to do the same.

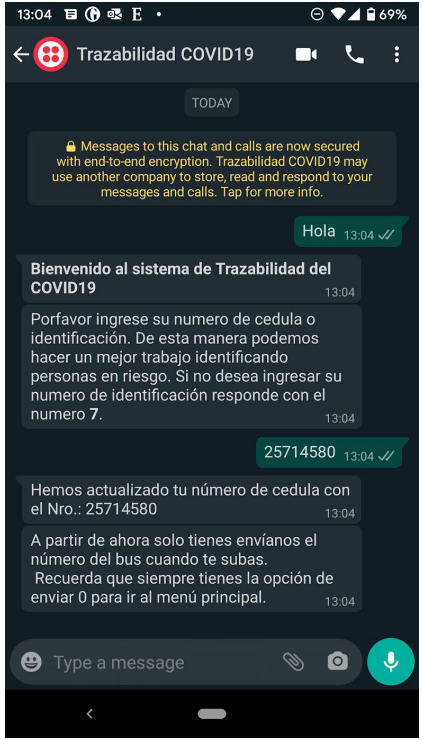


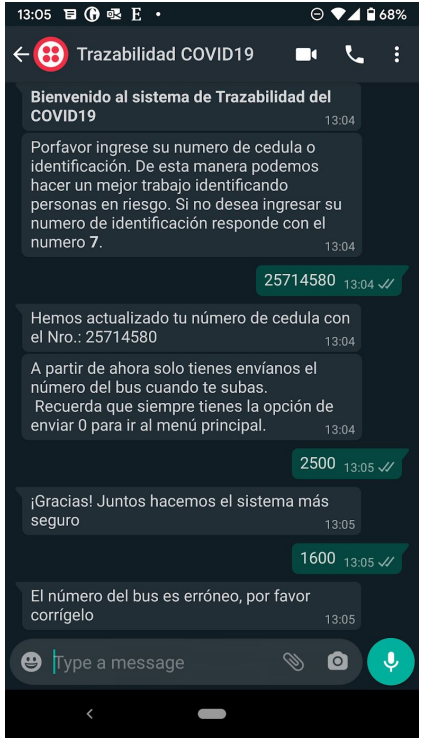
How does it work?

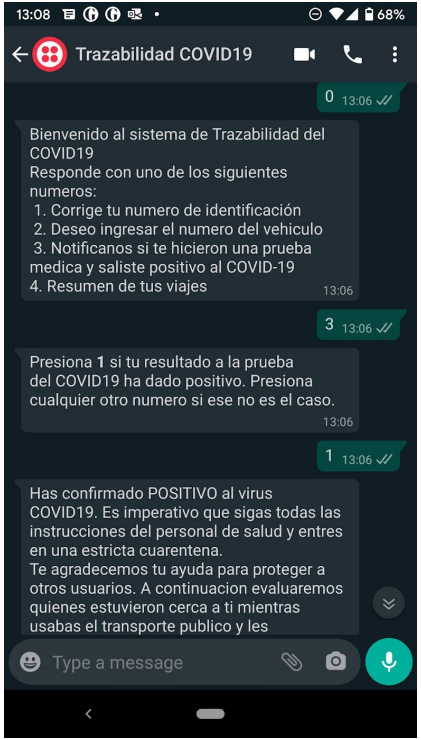
- When users start adding the busses they are using, we would have a large database of all users that could have interacted with other users.
- If a user were to result positive to COVID19, health authorities or the person could declare himself positive to the virus.
- Then the authorities would be able to query a list of all the people that are at higher risk and contact them for prevention. The service could also alert users. Saving precious times and resources from the authorities.

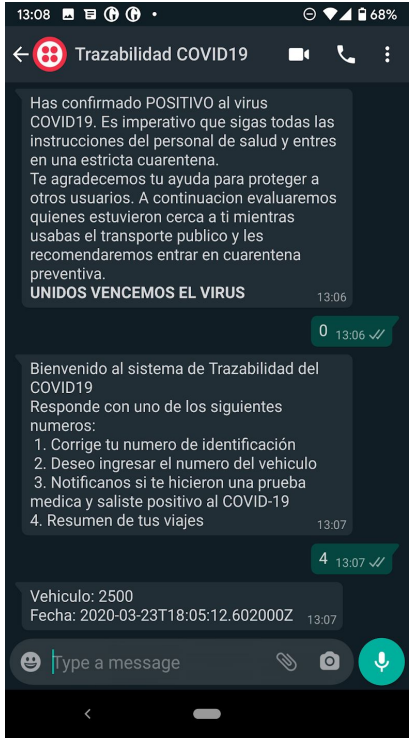
Advanced Contact Tracing:

- **Screenshots of the application**









The Solution

- We decided to use Whatsapp as to reduce all barriers to entry into this essential system.
- With our solution we believe we can get a head start at identifying those at risk, slowing down, and significantly reducing the impact of the virus on society.
- Public transportation users can also feel there is a warning system, from which they can benefit if they were to be at risk. And hence protecting their families, friends, or colleagues.

Conditions for the Solution

Our solution is not likely to be as effective if other necessary measures are not taken seriously. For example:

- Constant cleaning and disinfecting of the bus
- Protection of the driver
  - For SITP enable all-door boarding
  - Prevent passengers of coming close to the driver.
- Mandatory use of masks for all users
- Operating each bus at 50% or less passenger capacity
- On floor sticker to show people where they should stand to maintain a safe distance

Further Ideas

- Create block schedules for different types of users, healthcare workers, Elderly, or Immunocompromised
- A driver specific number to text cleaning updates
- This is helpful because once the bus is cleaned it is assumed the COVID-19 is gone, in case there was a case.
- This means that the riders that board the bus after a cleaning would not need to go into self-quarantine.

Gracias