Subject: Proposal for Pandemic Drone

ABSTRACT

The going COVID-19 pandemic has brought almost all the countries on their knees. The only effective method is to test and social distance. However, for testing the particular individual has to travel to the hospital and there are extremey high chances that in the mean time he may contact hundreds of other individuals. In addition, it is extremely difficult to test every individual in a developing country like India. We propose to fight the COVID-19 by using the Drones. We propose to use Drones to not only test individuals at far off places but also sanitize the probable surfaces where there is a possibility of a virus. We can collect the data using the drones that can be used to analyse the social contacts of a COVID-19 individual and try to ease the process of tracing the contacts.

Objectives:

1. Use Drones (enabled with high resolution camera and thermal sensor) to measure the body temperature of an individual from a distance.

2. Use Drones to capture the images of individuals and process the realtime images and see if some individual is suffering from COVID-19 symptoms (like coughing, sneezing etc) using image processign and machine learning techniques.

2. Use Drones to sanitize specific places.

3. Collect the data and use the same for detecting the social contacts of a COVID-19 patient.

Methodology:

We propose to use Drones in this pandemic in order to help achieve the following objectives: Testing, Analysing the individuals in public for the symptoms, delivery of foods, spraying disinfectants, and creating a data set fro preciting the future course of action. We propose to embedded the Drone with a high resolution camera and a very accurate thermal sensor that can sense the body temperature from a distance. The data collected by the Drone can be transmitted to our high end server which can process the received data and in real time inform the authorities about different scenarios. Using Drones we can capture the real time images at different places, and sense the temperatue of individuals. The images captured are processed (using image processing and machine learning techniques) to find the individuals having the COVID-19 symptoms. Moreover, the information about the individuals having abnormal temprature can be shared with the

authority to single out those individuals and test them on immediate bases. If someone cam positive, we can process the images taken of that specific locality, get the social contacts of that particular person, and sanitize the palces he may have visited or touched. In addition, the images from the Drones can also be use to monitor the areas in order to make sure people are obeying the rules of the government in order to keep the virus away.

HARDWARE REQUIRED

- Drone with Thermal infrared camera.
- A high end server for data processing.

Completion Time: 6 months - 1 Year

Expected Cost: 5-10 Lakhs

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