



Dr. Covid.AI : An End-to-End Solution to Predict, Detect and Fight Coronavirus Disease & Global Pandemic

Team Members

SHREYAS LABHSETWAR

SOUMYA HARIDAS

RIYALI PANMAND

RUTUJA DESHPANDE

VEERASAI SUBRAMANIAM

PIYUSH KOLTE

RAJ SALVI

ALISTAIR BARETTO

College : Fr. C. Rodrigues Institute of Technology, Vashi

1. AI based HealthCare Section

- A complete WEB-APP to detect early presence of covid19 based on different health parameters (heart rate, blood oxygen SPO₂, respiratory rate).
- An Android-App to detect the above parameters.
- Location-wise grouping of potential covid19 patients for blood-testing through Pooled-test since it is a procedure commonly used to reduce the cost of screening a large number of individuals for infectious diseases.
- WEB-APP will report your status for the presence of covid19 after the required blood test.

2. NGO-Connect for the Underprivileged.

- Help the low-waged working community by connecting them to N.G.O's with the help of our tracker, where the users will be able to notify the N.G.O's of the presence of such communities.

3. Autonomous Mask Detection System.

- To detect presence of people not wearing masks in public places and notifying the authorities.
- Can be used in areas where sanitary discipline is a must.

4. Medical Supply Monitoring & Particulars Management Portal

- A National Drugs & Grocery Management System to manage the needs of all the citizens during lockdown situation.
- Home delivery option for delivery of essentials (as authorised by the Government of India).

5. ChatBot

- Patients under quarantine can interact with the chatbot and gain general knowledge about the current situation along with periodic reminders of medications and health tips.
- Chatbot will also provide the user with help-line numbers to address their concerns.
- Chatbot will serve as a companion to the patients by interacting with them and keeping them engaged.

FRONT END IMPLEMENTATION SCREENS

Test 1 of COVID-19 User Interface

Mr. Shreyas Labhsetwar

Testing Lab: 503A
ID : 2334

Latest Report : Diagnosis :

Oxyhemoglobin Curve

EMERGENCY ALERT

Oxygenhemoglobin Below Threshold

Doctor Details

Dr. Piyush Kolte
Critical Care Physician

Test 2 of (Pooled Test) COVID-19 User Interface

Mr. Shreyas Labhsetwar

Testing Lab: 503A
ID : 2334

Upload Test Results

Latest Report : Test Details :

Specialist

Dr. Piyush Kolte
PATHOLOGIST

Result of Test 2 (Pooled Test) of COVID-19 User Interface

Mr. Shreyas Labhsetwar

Testing Lab: 503A
ID : 2334

Patients Pool

- Mr. Shreyas L. View Report Fix Meeting
- Ms. Soumya H View Report Fix Meeting
- Ms. Riyali P View Report Fix Meeting
- Ms. Rutuja D View Report Fix Meeting
- Mr. Raj S View Report Fix Meeting
- Mr. Alistair B View Report Fix Meeting
- Mr. Atharva S View Report Fix Meeting
- Mr. Veera S View Report Fix Meeting

Specialist

Dr. Piyush Kolte
PATHOLOGIST

Medical Supply Monitoring & Particulars Management Portal

Wellness 24x7, Vashi

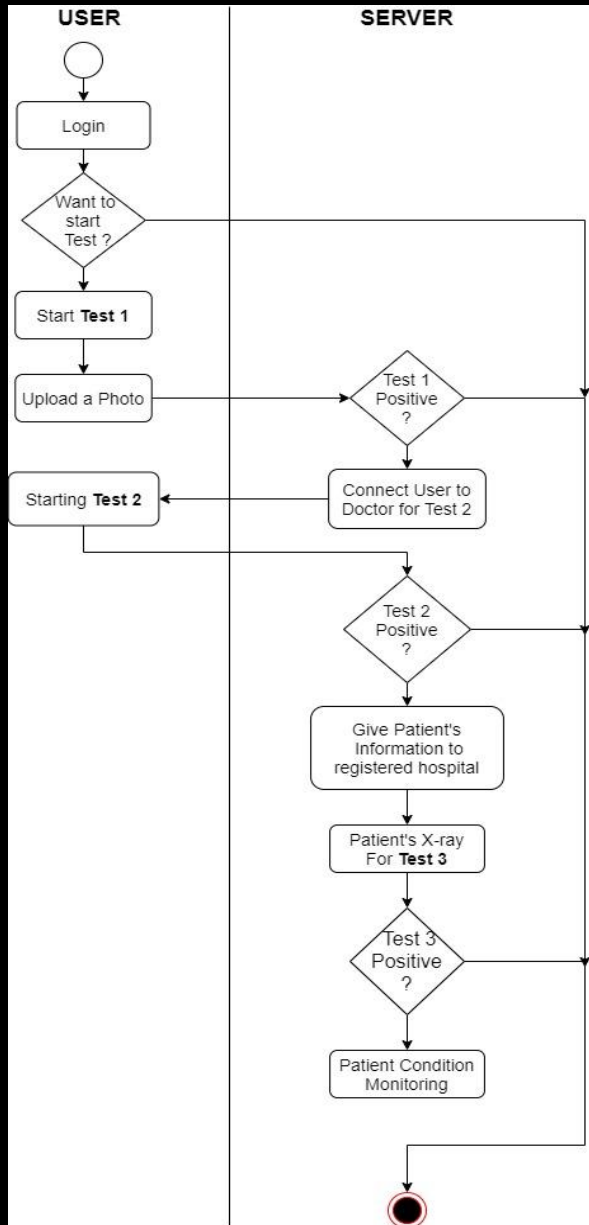
ID : 2334

Order Supply Cart

- Hydroxychloroquine ₹ 6.93 / tablet - 1 +
- Fusogenix ₹ 1.43 / tablet - 2 +
- ChAdOx1 ₹ 11.03 / tablet - 1 +
- Gimsilumab ₹ 10.26 / tablet - 1 +
- BPI-002 ₹ 0.73 / tablet - 4 +
- INO-4800 ₹ 3.81 / tablet - 1 +
- Brilacidin ₹ 2.56 / tablet - 2 +

Total ₹ 42.93

AI based HealthCare Section



The AI based Healthcare solution is proposed to operate in 3 Stages:

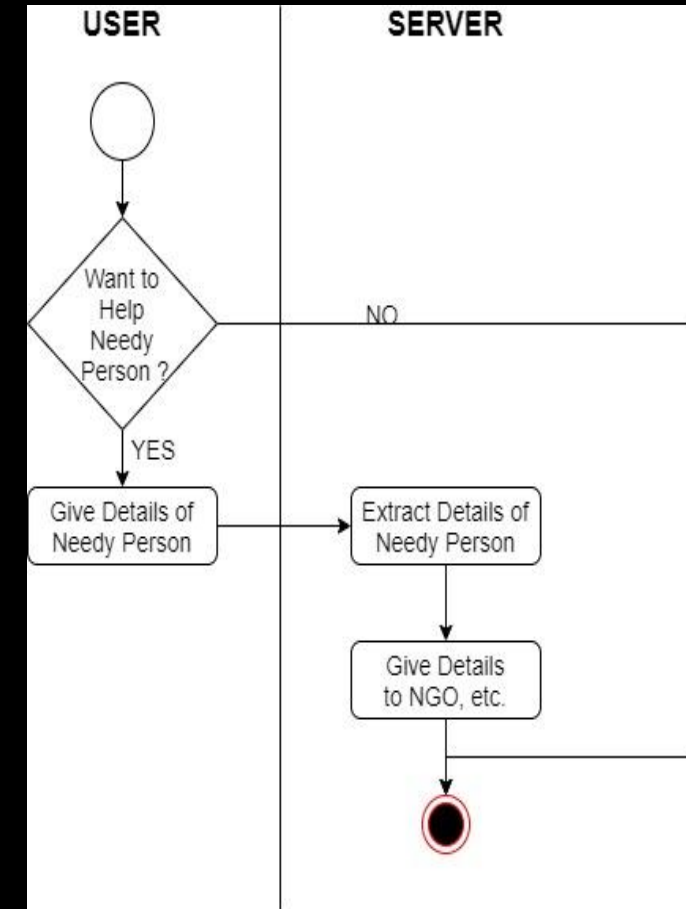
Stage 1: COVID Prediction by measuring the Heart Rate, Blood Oxygen Levels and Respiratory Rate. This will indicate whether a person must go for Stage 2 Test or not.

Stage 2: COVID Detection using Pooled Blood Test. Blood Test in pools of 32/64 Patients at once can speed up the testing process exponentially using a limited set of resources.

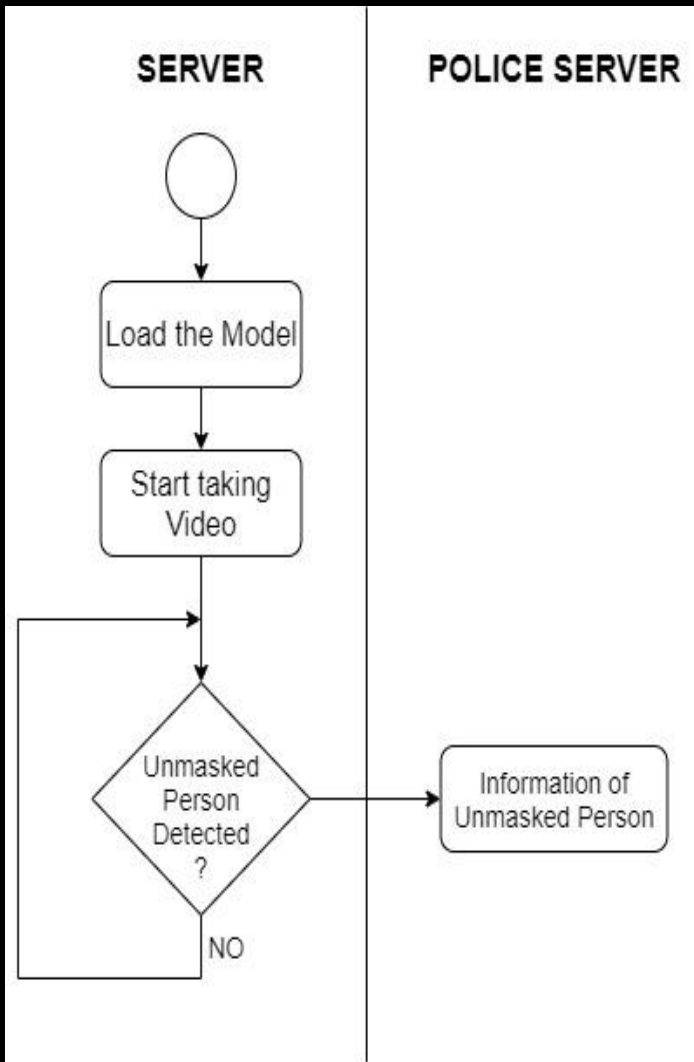
Stage 3: COVID Fighting using automatic X-ray Classification. This will comprise the continuous and comprehensive evaluation of patient under treatment until the patient is declared Corona free.

NGO-Connect for the Underprivileged

- Our Complete AI End-to-End Solution will have the additional feature of NGO Connect.
- Using this, Indian Citizens can share details of those needing food/shelter so that the nearest NGOs and Social Welfare Associations can get in touch with the needy.
- The report will contain the location and information about the needs of the community at various geographic locations.
- This will also help the government determine the needs of various people at various places.



Autonomous Mask Detection System.



- CCTV cameras can help detect and punish individuals without masks in public places during post-covid19 restrictions and even after the lockdown is lifted.
- Police Officers can be alerted immediately of such individuals.
- We will be using a Convolutional Neural Network powered with the OpenCV Library of Python to implement detection system with high accuracy.
- This will ensure that public health & safety concerns are addressed autonomously, without the direct need of officials.

Medical Supply Monitoring & Particulars Management Portal

- This portal would help users purchase food items and other medical essentials.
- The portal will help users view the inventory items for purchase and add products to their cart which will be then delivered to them.
- This will ensure that people don't go outside in search of essentials thus maintaining the quarantine status.
- This portal will also help avoid an atmosphere of panic since more general stores can stay open with this approach.

