COVID-19 Probability Detector

Introduction

Nowadays coronavirus is spreading so fast that it has been spread in almost every country around the globe. India is no exception. In India the virus infecting people with increasing speed. If somehow it goes beyond control then it can infect many more patients then we can think. So, we need to be prepared for this pandemic.

In our country we won't have enough beds & medical facilities to handle big amount of infected people. Even countries like Italy & USA are failed providing medical treatment to all the infected people. So, as it is always better to stay prepared, I have made a machine learning model which will helps patients giving them their probability of being positive with COVID-19, the hospitals can also prioritize them according to their probability of being infected. So that hospitals can provide whatever medical treatment to them first who have more probability of being infected with COVID-19.

The Idea

- The idea is to stop the transmission by prioritizing tests & hence detecting the cases quickly.
- Data can be collected on the symptoms of COVID-19.
- Data should be provided by the govt. about all of the positive cases and their symptoms, data can be achieved from other countries' cases as well, because more data helps algorithm work properly.
- A machine learning model is then trained on the data to find out the probability of a person having the infection.
- The model is then used to find out whom to test for the infection first under a limited testing capacity.
- Note: The test to check if patient is positive or not is still mandatory, this model is just prioritizing patients from their probability of being infected.
- The same model can be used to find potential candidates for conducting random tests.

Machine learning model parameters

- A team of doctors can sit to find out the best model parameters.
- But according to me a sample set of parameters is as follows:
  - ✓ Inputs:
    - Fever (°C) - Continuous
    - Body Pain – No/Yes
    - Age (years) – Discrete
    - Runny Nose – No/Yes
    - Breathing difficulties – Categorical
  - ✓ Output:
    - Probability of COVID-19 Infection

Working

- Please run **main.py** file in command prompt (by pressing **Shift+RMB** -> **Open Command window here** (In command prompt) -> **python main.py** (If you have installed python in your system)).
- Copy URL starting with http://127.0.0.1 and paste it the browser then hit enter.
- Submit the form and you will get the probability of being infected.