**Detecting COVID-19**

Aim of this project is to deliver a model which can take a patient’s chest X-ray image as input and detect if the person is suffering from COVID-19 or not. For this purpose, I have built a CNN model which takes Kaggle’s COVID-19 Radiography Database as input.

**Getting Started**

These instructions will get you a copy of the project up and running on your local machine for development and t

testing purposes.

This project is written in Python.

I ran this project on AWS platform, but it also can be run on the local machine, but it takes quiet a lot of time. I am submitting 4 python files

1. Complete program from scratch with 2 convolution layers and 1 dense layer named “termproject1.py”
2. Complete program from scratch with 4 convolution layers and 2 dense layers named “termproject2.py”
3. Program which has saved model from termproject1 as “using\_savedmodel\_1\_\_termproject1.py”
4. Program which has saved model from termproject2 as “using\_savedmodel\_1\_termproject1.py”

3, 4 programs can be run easily in the local machine since the model is trained and saved from the programs written from scratch, they can display all the results.

1, 2 programs can also run on local machine but takes 10hours and more.

Dataset, saved models, saved covid\_data and saved covid\_ labels are also included in the zip file.

Both these programs gave me the best result, hence submitting them.

**Prerequisites**

1. To run these programs in local machine, anaconda and PyCharm should be installed.
2. TensorFlow, keras, sklearn, OpenCV, imutils, must be installed.
3. Once the environment is set up the program can be loaded along with the dataset and saved models into PyCharm and using all the imports as written in the program the program must give the results.