MAHARAJA INSTITUTE OF TECHNOLOGY MYSORE

Department of Computer Science and Engineering

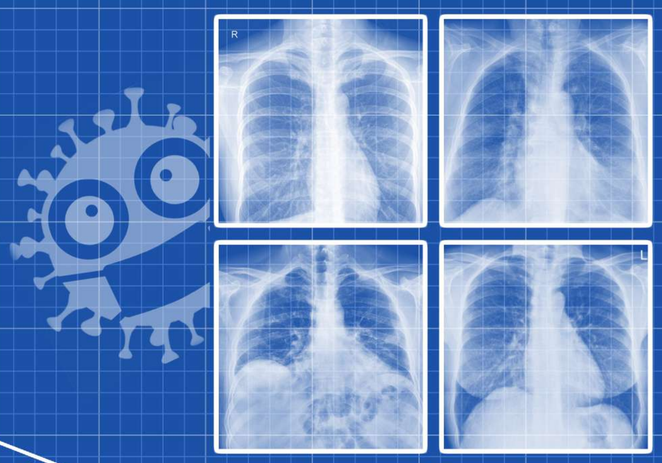
"TECHNIX-2021- PROJECT POSTER PRESENTATION"

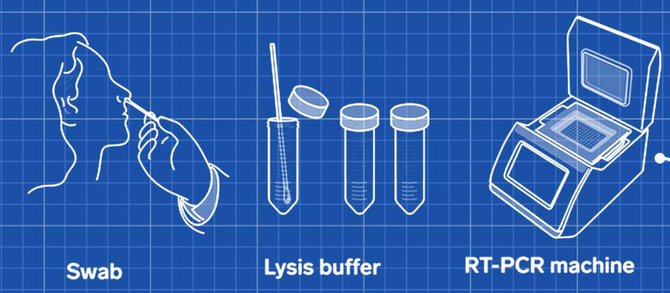
B-05

COVID - 19 DETECTION FROM CHEST X-RAY IMAGE USING DEEP LEARNING

EXISTING SYSTEM:

RT-PCR
Qualitative detection of nucleic acid from SARS-CoV-2 in upper and lower respiratory specimens (such as nasopharyngeal or oropharyngeal swabs).





WHY EARLY DIAGNOSIS IS NECESSARY ?

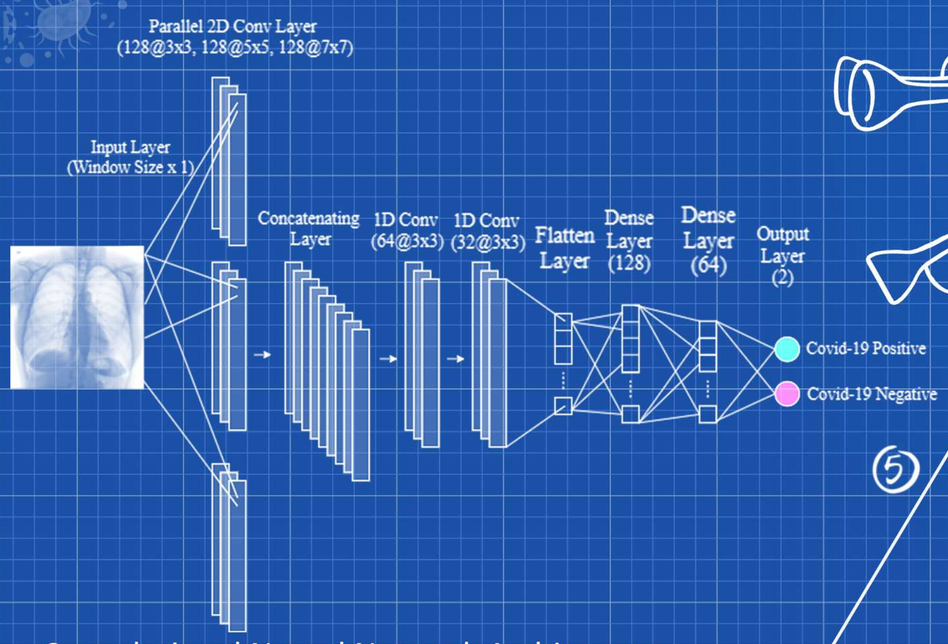
The early and automatic diagnosis of Covid-19 may be beneficial for countries for timely referral of the patient to quarantine, rapid intubation of serious cases in specialized hospitals, and monitoring of the spread of the disease.

OBJECTIVES :

To design and develop a Covid-19 detection system which can help in quick and accurate results.
To establish an early screening model to distinguish Covid-19 infected and Healthy cases.
To overcome the problem of lack of specialized physicians in remote villages.
To build a real-time application useful for the doctors, patients and the rest of the world.

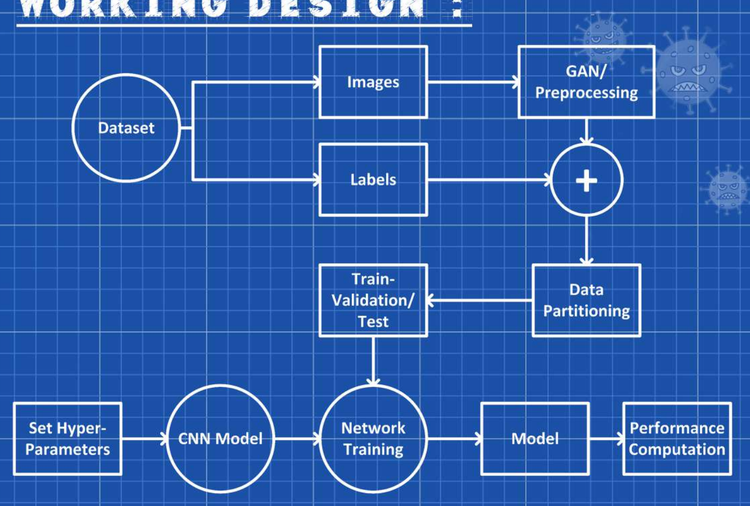
Coronavirus disease 2019 (COVID-19) is a contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The sudden spike has put unprecedented load over healthcare systems.

TRAINING CNN MODEL :



Convolutional Neural Network Architecture :
A Convolutional neural network (CNN) is a neural network that has one or more convolutional layers and are used mainly for image processing, classification, segmentation and also for other auto correlated data.

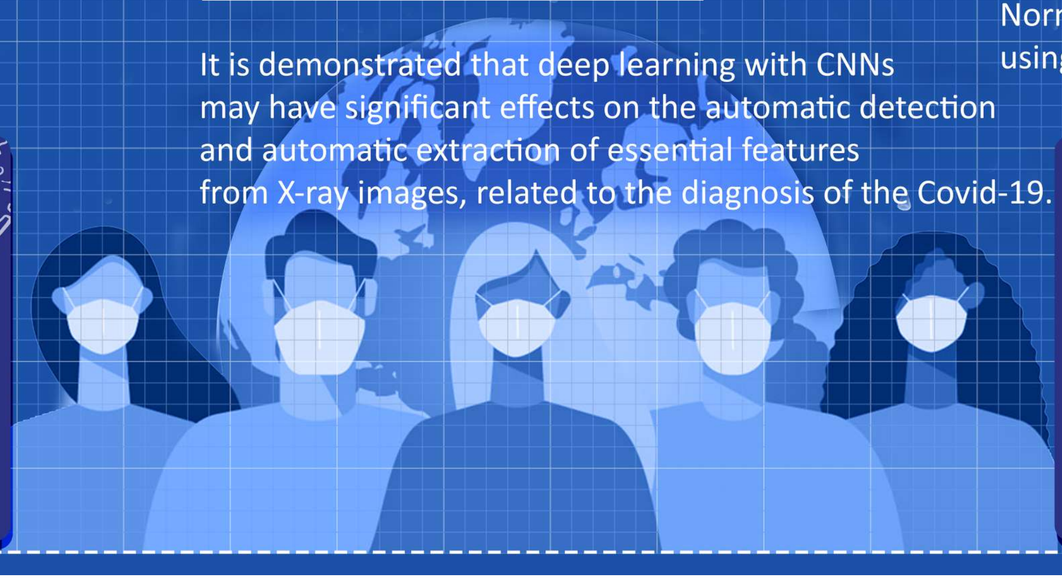
WORKING DESIGN :



Developing a Computer Aided Detection (CAD) tool for iterative Covid-19 detection, along with the adequate description of its forming techniques which includes feature selection, extraction and classification of neuro images
It takes a chest X-Ray Image as input and outputs a prediction among two classes: Normal/COVID-19 negative and COVID-19 positive using the novel Deep Neural Network based model.

EXPECTED OUTCOME :

It is demonstrated that deep learning with CNNs may have significant effects on the automatic detection and automatic extraction of essential features from X-ray images, related to the diagnosis of the Covid-19.



PO's Mapped :

PO - 2
PO - 4
PO - 5
PO - 6
PO - 7

Presented By Batch - 05 :

Thushar Gowda M S	4MH17CS110
Sushith S Jhenkar	4MH17CS104
Suraj T C	4MH17CS103
VidyaShree M S	4MH17CS115

Under the Guidance :
Prof. Pratap M S