Covid-19 detection system with CNN using chest x-ray

Abstract:

Covid-19 has changed our entire world having been a total menace. In February 2020, the World Health Organization (WHO) proclaimed it to be pandemic. It was first believed to have emerged from China’s Wuhan, a city in Hubei province, in late December 2019. This RNA virus has had a disastrous impact on the whole human civilization killing more than half a billion people worldwide. Even developed nations with well-established medical infrastructure, such as the USA, France, Italy, United Kingdom, etc., were shocked and unable to stop the loss of human life.

To date, RTPCR and other tests have been used to identify the illness. However, they take a little longer. Therefore, in order to construct new models utilising the CT scan (CTS) and chest X-ray (CXR) pictures of the patients, researchers are applying artificial intelligence-based approaches, particularly deep learning methods. Their goal is to diagnose the disease in real time and with perfection. This work focuses on developing an improved model in order to instantly detect covid-19 using chest X-rays with maximum perfection.

Tentative work plan:

|  |  |
| --- | --- |
| Work Plan | Time Period |
| Preparing Problem Statement | 1st Oct-10th Oct |
| Collecting the research paper in the problem domain | 11th Oct-25th Oct |
| Prepare dataset | 25th Oct-31st Oct |
| Pre-processing of image data | 1st Nov-10th Nov |
| Train CNN model with dataset | 10th Dec-31st Dec |
| Results analysis and comparison | 31st Dec to 5th Jan |