INFORMATICS INSTITUTE OF TECHNOLOGY

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In Collaboration with

UNIVERSITY OF WESTMINSTER

COVID FORECAST AND DETECTION

A Project Proposal by

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ABSTRACT

Corona Virus is one of the diseases that is largely affecting many of the population and spreading worldwide throughout causing pandemics and many other crises. Vaccination allows us to not get infected, but it does not stop the spread. So, this study is done to reduce the spread of covid, this is obtained by two models. One part of this study is where the locations of the covid patients will be mapped into the Sri-Lankan map, the most concentrated areas will be marked allowing the user to be aware, this will be shown with a forecasting chart which is produced by an LSTM algorithm of the new confirmed patients that are to be happening. We do this by obtaining datasets of the confirmed cases that has occurred so far in Sri-Lanka, it is easier to get accurate results since accurate datasets are easier to find if it's based off one country and not globally. The second model is a CNN model where we use X-ray images to identify covid within users by asking the users to input an X-ray image to the system. When or if the user is diagnosed positive by the system, the system adds the current user's location data to the covid map which allows all users to get an idea of the most concentrated locations of covid patients. This system is developed to identify and reduce the spread of covid for the people who travel a lot during the pandemic and also by detecting unidentified patients who have not taken any covid tests through diagnosis and self-awareness.

Keywords: Forecasting total covid cases, Diagnosis, X-ray images, Machine Learning, CNN, LSTM, Mapping covid patients.