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Classification and Localization of COVID-19 based on a Pneumonia Radiograph using a Deep Learning Approach

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Abstract

The world is battling the pandemic corona virus disease (COVID-19) now, and even after 2 years of the COVID-19 pandemic, this technology is still not reasonably advanced to tackle the battle against this virus most efficiently. The total numb… COVID-19 cases worldwide surpassed 420 million, with 5.8 million deaths. COVID-19 infects a person with various symptoms, and one of the symptoms is pneumonia. A person suffering from pneumonia may or may not be carrying COVID-19. This research article aims to describe an X-radiation (X-ray) of patients with pneumonia and proposes other subjects who also have the corona virus. This system is based on Deep Learning (DL), and the Convolutional Neural Networks (CNN) method is applied. The work is done with additional help from the frameworks Tensorflow and Keras. Firstly, the images are loaded into the compiler, cleaned, and preprocessed accordingly. The next thing to come up with is setting up the Neural Network (NN)

+ COVID-19. The paper's outcome has an accuracy of 96% to 98%.

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Recommendations

Efficient deep neural networks for classification of COVID-19 based on CT images: Virtualization via software defined radio

BDCNet: Multi-classification convolutional neural network model for classification of COVID-19, pneumonia,

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COVID-19 Detection Using Chest X-Ray Images Based on Deep Learning

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