< **Back**

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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 number of 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 ⬛onal help from the frameworks Tensorflow and Keras. Firstly, the images are loaded into the

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Rectified Linear Unit (ReLu), is applied. Finally, the model is trained, and a classification is done to determine whether the patient's X-ray is only for pneumonia or pneumonia + COVID-19. The

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