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(57) Abstract :

Corona virus disease 2019 (COVID-19) is an infectious disease that begins with flu-like symptoms. COVID-19 began in China and spread rapidly throughout the world. This disease usually results in Pneumonia. Due to the fact that pulmonary infections can be observed via radiography images. This proposal focuses on the detection of corona virus disease (COVID-19) based on Deep Transfer Learning (DTL) methods by analyzing Chest X-ray (CXR) images. The proposed DTL framework classifies CXR images as COVID-19 infected or normal images. Along with the custom CNN, four different pre-trained deep Convolution Neural Networks (CNNs) were used: Vgg-16, ResNet-50, InceptionV3, and MobileNet. The CNN models were trained using CXR datasets collected from open access provided by Kaggle and GitHub. In this study, the classification accuracy of Covid-19 and the normal image is 94%, and the AUC was 0.98. Pre-trained CNN models may be used to support radiologists invalidating their initial screening. This proposal studies deep learning approaches for automatically analyzing chest X-ray images to provide health professionals with precise tools for screening COVID-19.

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