Feature Extraction and Classification of Chest X-Ray Images Using CNN to Detect Pneumonia

Publisher: IEEE Cite This PDF

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Abstract:
Pneumonia is an infection that causes inflammation of lungs and can be deadly if not detected on time. The commonly used method to detect Pneumonia is using chest X-ray which requires careful examination of chest X-ray images by an expert. The method of detecting pneumonia using chest X-ray images by an expert is time-consuming and less accurate. In this paper, we propose different deep convolution neural network (CNN) architectures to extract features from images of chest X-ray and classify the images to detect if a person has pneumonia. To evaluate the effect of dataset size on the performance of CNN, we train the proposed CNN's using both the original as well as augmented dataset and the results are reported.

Published in: 2020 10th International Conference on Cloud Computing, Data Science & Engineering (Confluence)

Date of Conference: 29-31 January 2020

DOI: 10.1109/Confluence47617.2020.9057809

Date Added to IEEE *Xplore*: 09 April 2020

Publisher: IEEE

ISBN Information:

Conference Location: Noida, India