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Emphysema Detection using Chest radiograph with Image Processing

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Abstract

Emphysema is a disease of lungs. Chest X-rays or CT scans can identify this disease. It is hard to figure out if the patient has emphysema simply by looking at the x-ray or a CT scan. X-ray or CT scans has not a cleared image of lungs. In regular way doctors must do another test figure out if the patient has this disease or not. So doing multiple tests is not an efficient way to determine emphysema.

This project will create a system to detect emphysema from scanning chest X-rays or CT scans. This system will use two image processing models which is separately trained on chest X-ray and CT scans. This will be achieved by assembling the two image processing models.

This ensemble model evaluated separately and abled to achieve high accuracy.

Subject Descriptors: Emphysema Detection using Chest radiograph with Image Processing

Keywords: Machine Learning, Deep Learning, Computerized Tomography, X-Ray, CT scan, Convolutional Neural Network