

Pneumonia Detection

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31 August 2021

The goal of the project is to build a machine learning model that diagnoses pneumonia based on a chest X-ray.

Preprocessing of the images

- Resize (150,150)
- 1 channel for grayscale
- values between 0-1
- Random data augmentation (rotation, flip, zoom and shift)

The Model

Conv2D 32 kernel 3x3 Conv2D 32 kernel 3x3 BatchNormalisation MaxPooling 2x2
Conv2D 32 kernel 3x3 Conv2D 32 kernel 3x3 BatchNormalisation MaxPooling 2x2
Conv2D 32 kernel 3x3 Conv2D 32 kernel 3x3 BatchNormalisation MaxPooling 4x4
Conv2D 128 kernel 3x3 Conv2D 64 kernel 3x3 BatchNormalisation MaxPooling 2x2
Flatten Dense layer 128 Dense layer 1

Results

Accuracy of 90%

