Pneumonia Detection

Nathanaël Mariaule

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

Preprocession of the images

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

Conv2D 32 kernel 3x3
Conv2D 32 kernel 3x3
BatchNormalisation
MaxPooling 2x2
Conv2D 64 kernel 3x3
Conv2D 64 kernel 3x3
BatchNormalisation
MaxPooling 2x2
Conv2D 258 kernel 3x3
Conv2D 258 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%