

X-ray classification project



Agenda

- Business Problem
- Data Understanding
- Models
- Results
- Thank you

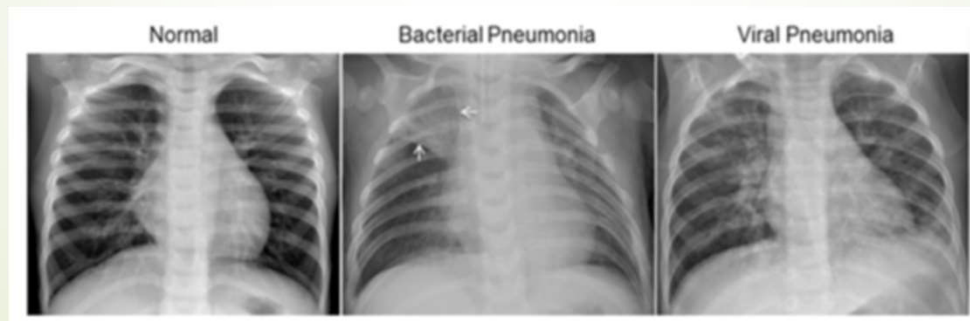


Business Problem

- A radiologist classifies x-rays as Pneumonia or normal.
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Data Understanding

- 5,856 chest x-ray images.
- Each image is labelled as either normal or pneumonia.
- 25% of the images are labelled normal and 75% pneumonia.



Models

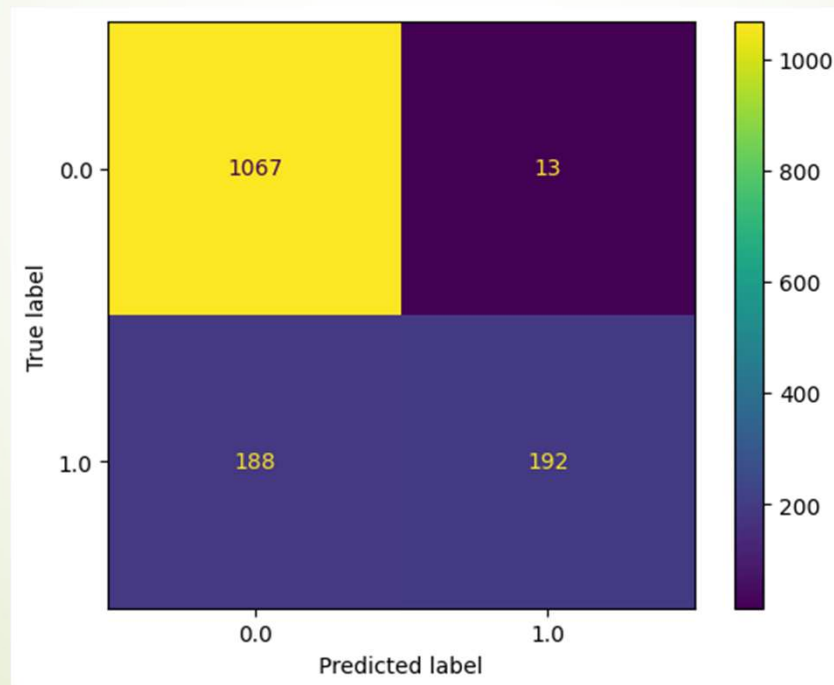
- Baseline:
 - a neural network with 1 hidden layer, with 64 neurons.
- 2nd model with added layer
- 3rd model with higher learning-rate

Validation and training accuracies

	Baseline model	<u>Model 1a</u>	Model 2	Model 3
Val	88%	<u>90%</u>	81%	70%
Training	90%	<u>90%</u>	90%	90%

Results/conclusions

- 86% accuracy compared to 73%
- 13 false negatives and 188 false positives out of 1460 predictions.
- this model can be used as a check by the radiologist





Thank you

