



Pneumonia Detection

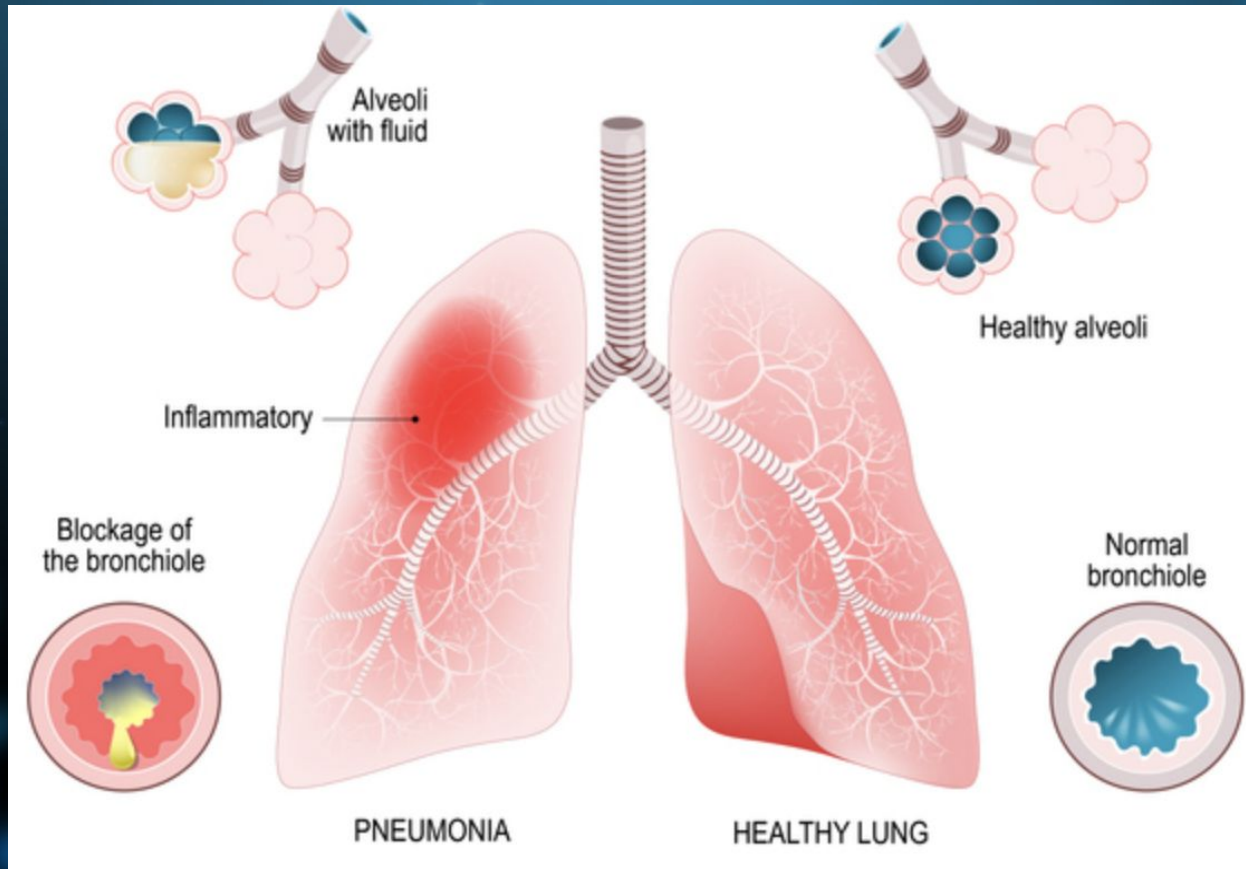
Qilun Chen

Instructors: Gowtham and Comeaux

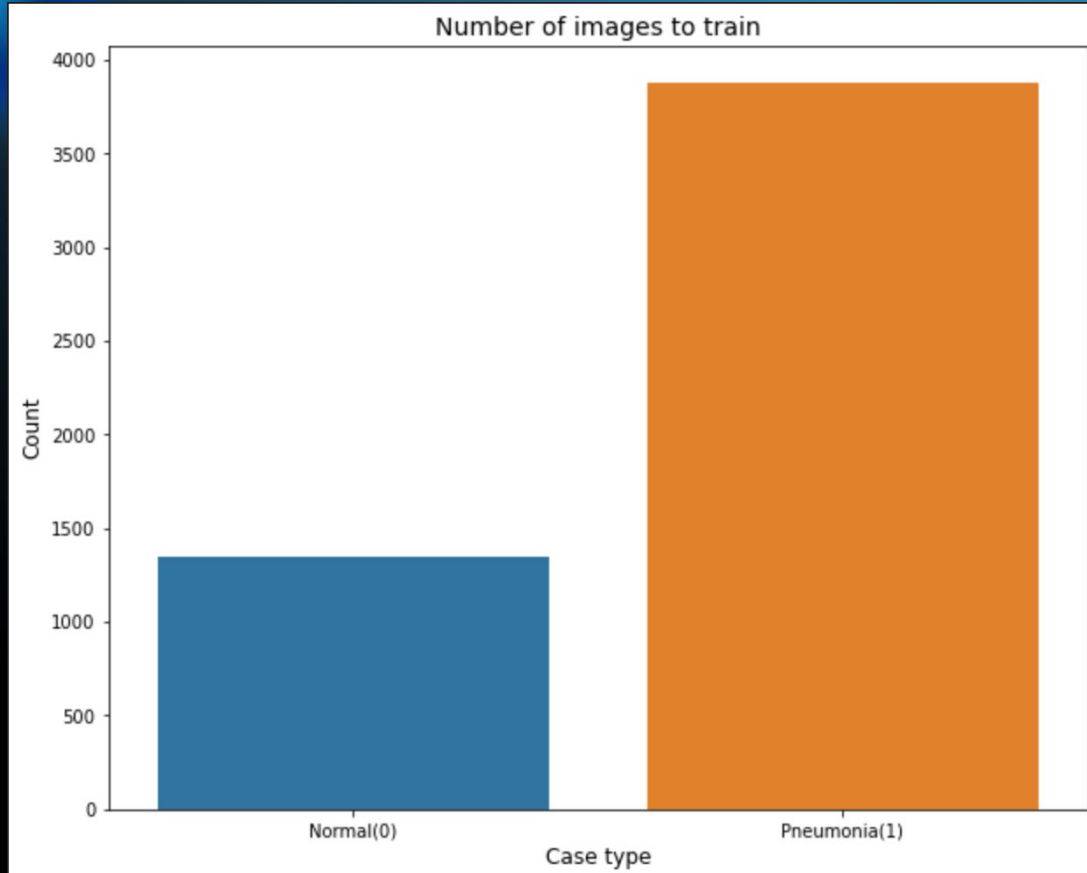
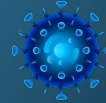
Define the Problem

Identifying whether or not they have pneumonia by Image-Based Deep Learning

Symptoms of the Disease



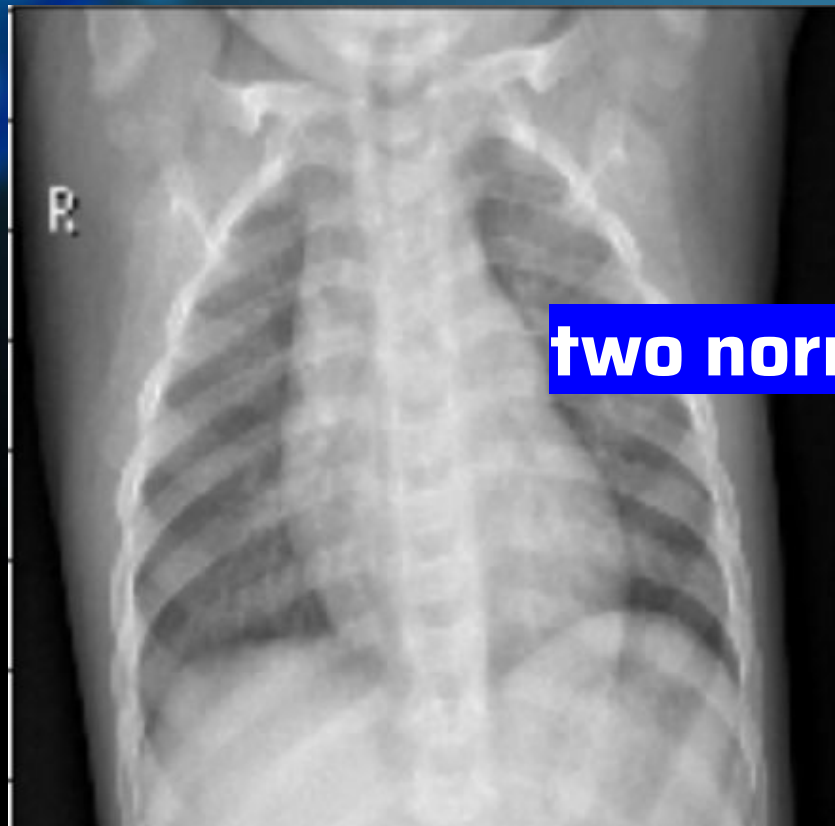
About the Data



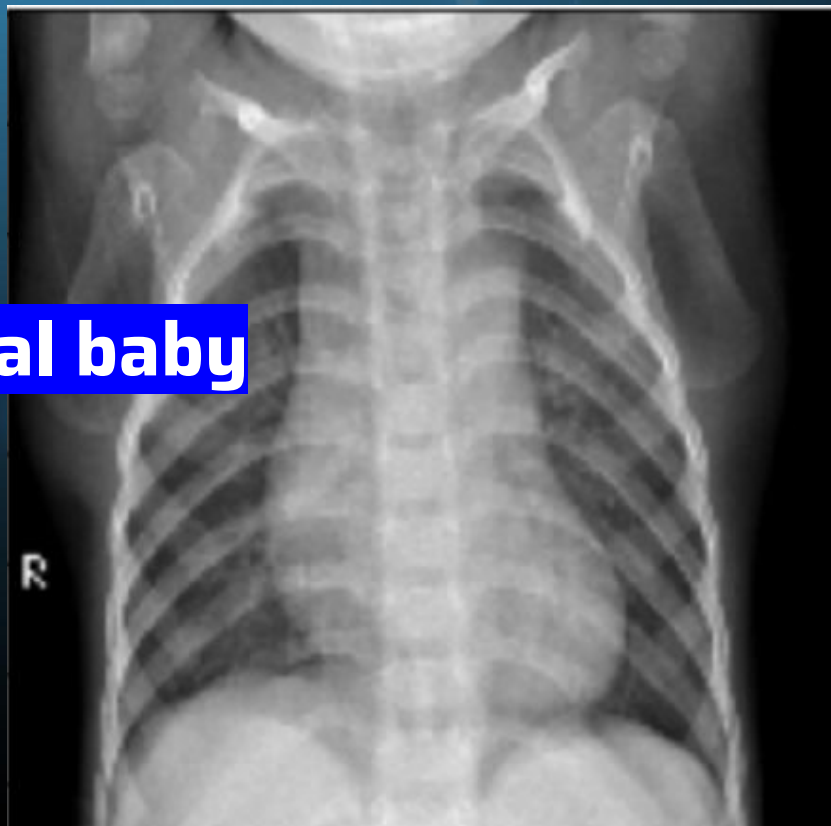
Mendeley Data

- **University of California San Diego**
- **Guangzhou Women and Children's Medical Center**

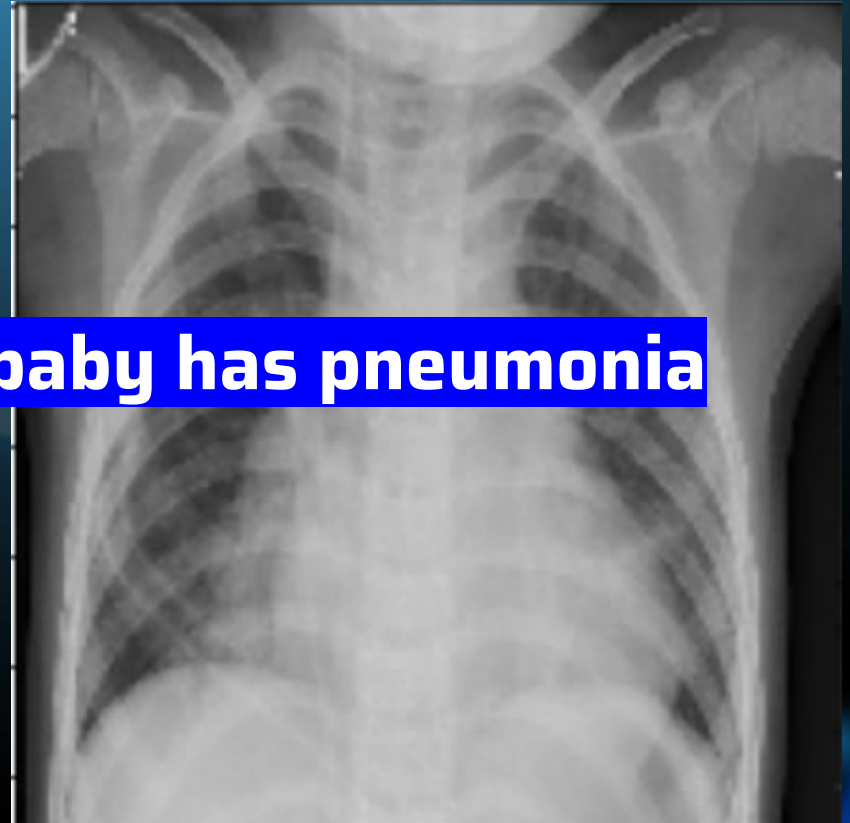
Meet Data



two normal baby

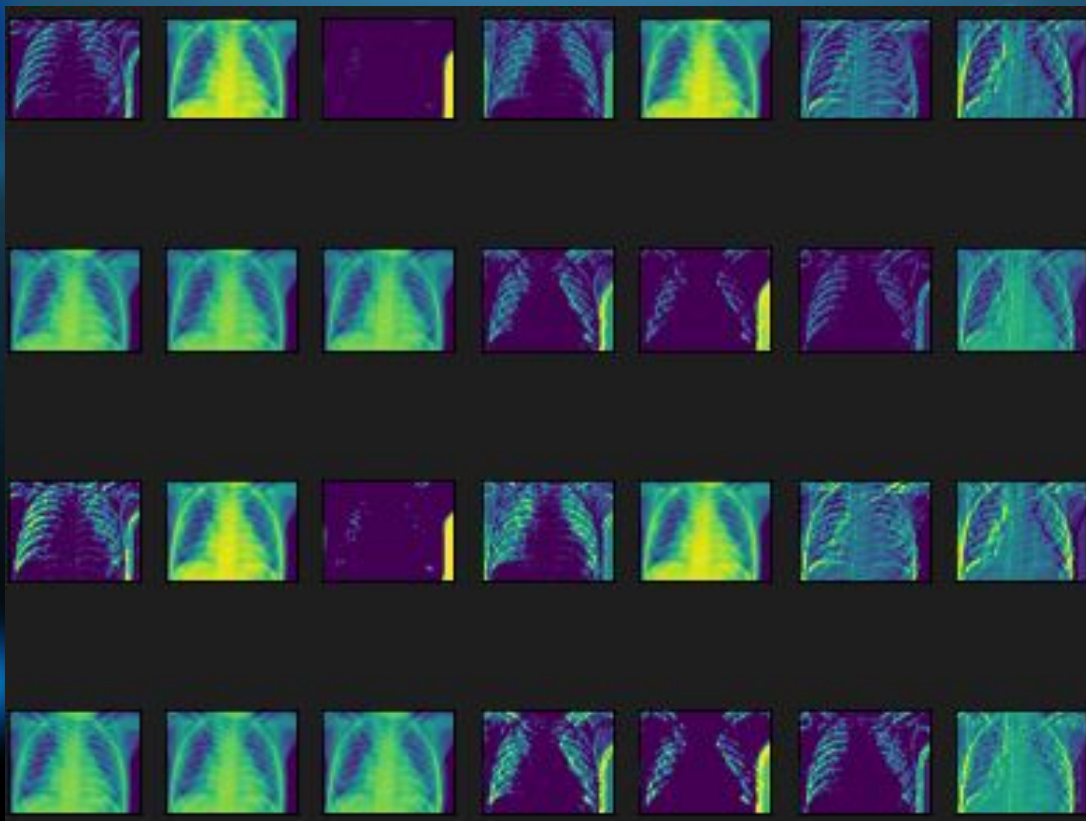


Meet Data



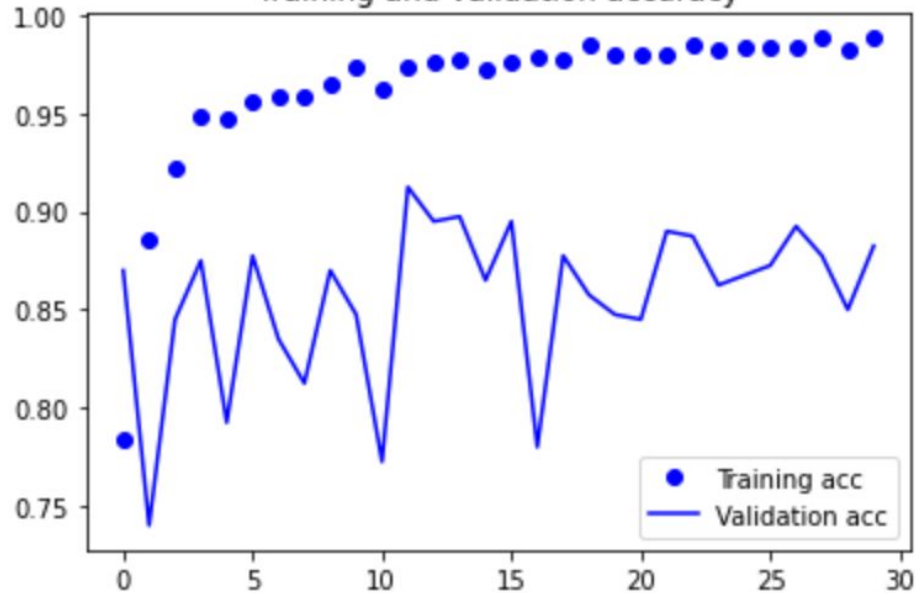
Two X-ray from one baby has pneumonia

The Feature Map

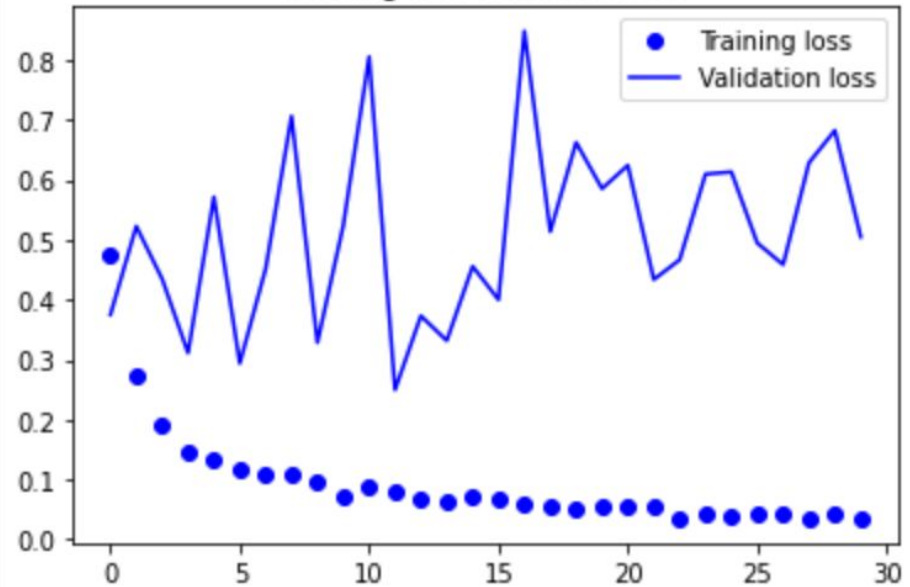


Visualizing model performance

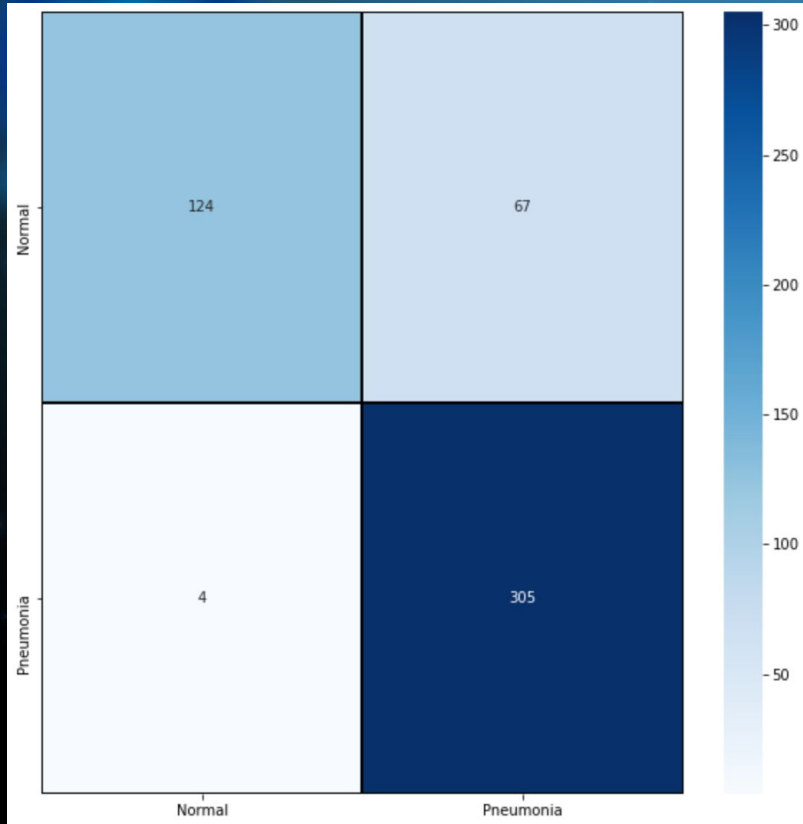
Training and validation accuracy



Training and validation loss



Confusion matrix



Model Accuracy 86.5%

My model say “it is pneumonia”



My model say “it is not pneumonia”

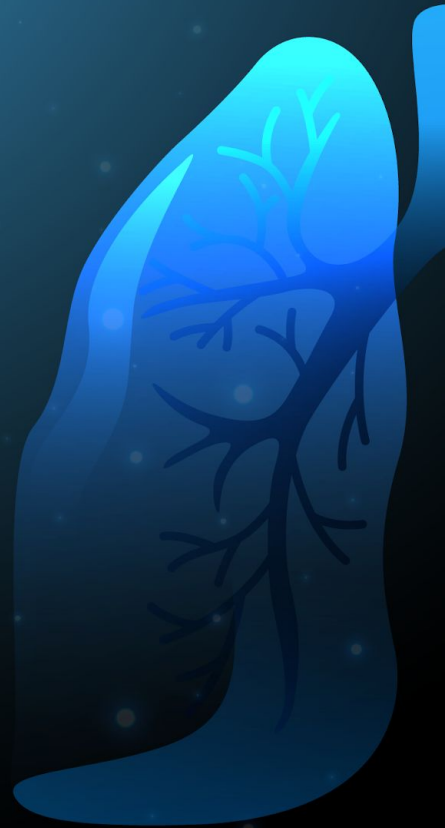


Optimize

We see that our accuracy on test data is 86.5%. It may indicate overfitting.

Almost all pneumonia images are correctly identified but some normal images are fail to identify. I should aim to increase our precision.

- More Data
- CT Findings



THANKS