

# Pneumonia Detection



**Business  
Problem**

**Data  
Understanding**

**Modeling**

**Results  
and  
Evaluation**

**Recommendations  
and  
Next Steps**



# Data Understanding



The dataset from Kaggle contained X-ray images for patients with and without pneumonia.

**Train set:**

Pneumonia =3575

Normal=1041

**Validation set:**

Pneumonia =308

Normal=308

**Test set:**

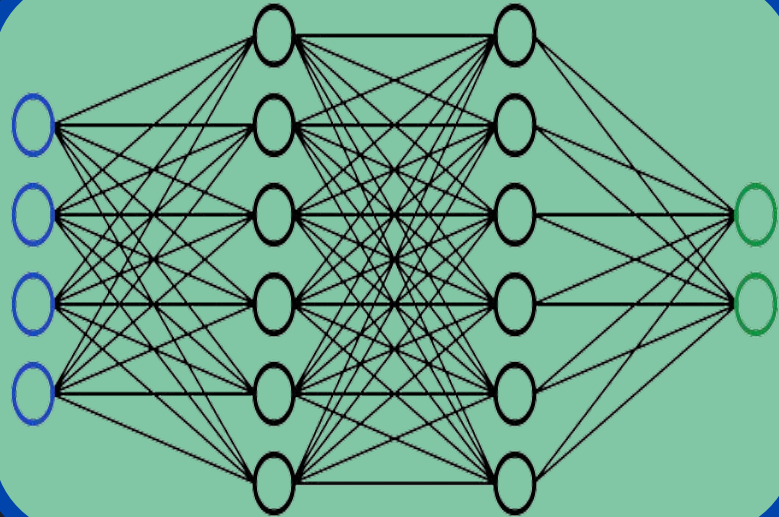
Pneumonia =390

Normal=234

# Modeling

## Neural Networks

- Process complex data such as image
- Fast
- Efficient

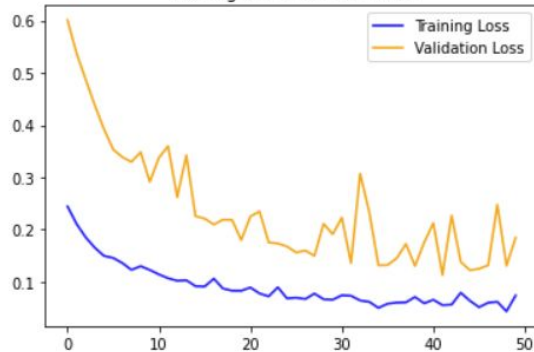


# Results and Evaluation

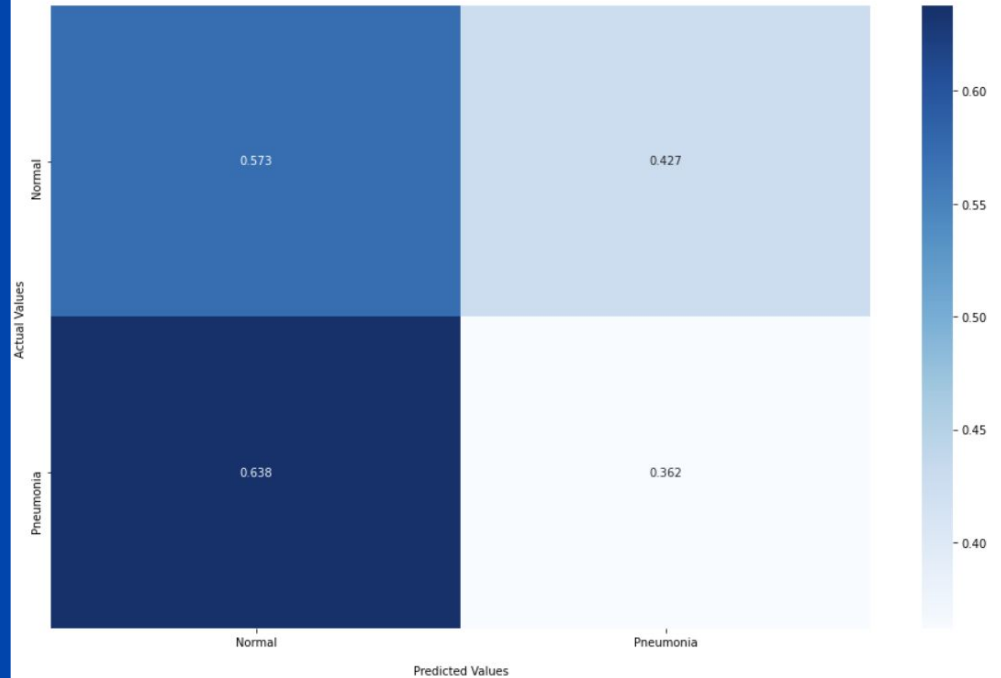
Training and Validation Accuracy



Training and Validation Loss

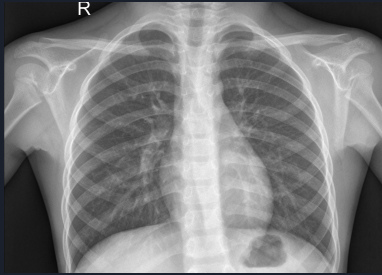


Predictions for Pneumonia cases

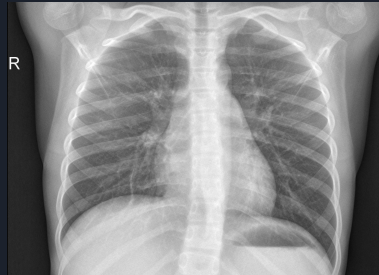


# Results and Evaluation

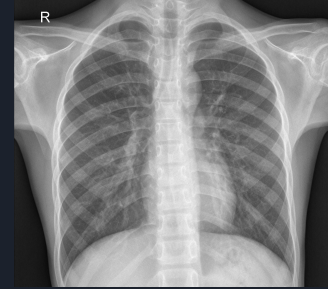
Actual: Normal  
Predicted: Normal



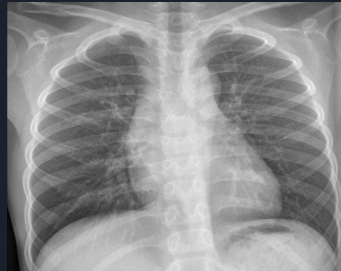
Actual: Normal  
Predicted: Pneumonia



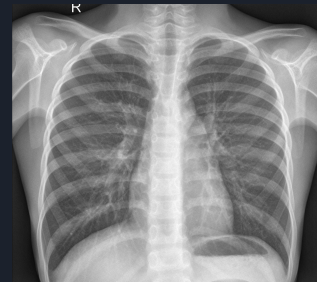
Actual: Normal  
Predicted: Normal



Actual: Normal  
Predicted: Normal



Actual: Normal  
Predicted: Pneumonia



## Recommendations

**No recommendations  
given at this time**

## Next Steps

- **Use other transfer learning models**
- **Tune transfer learning models**
- **Gather more information**



# Thank you!

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