

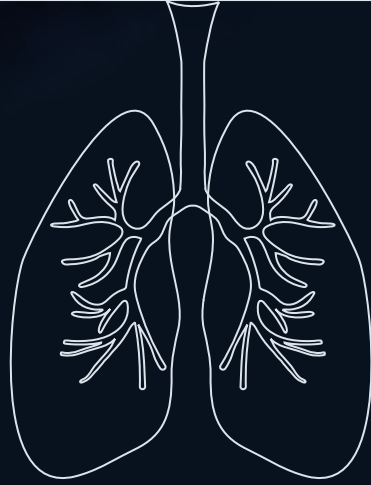
New Tool for Pneumonia Diagnosis

By Karina Basto Eyzaguirre

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01

Business Understanding



“Pneumonia tragically claims
over 700,000 young lives
annually, demanding urgent
and efficient diagnostic
solutions”



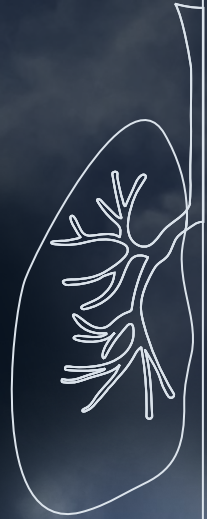
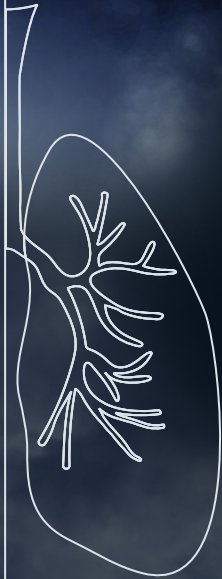
02

Data Understanding

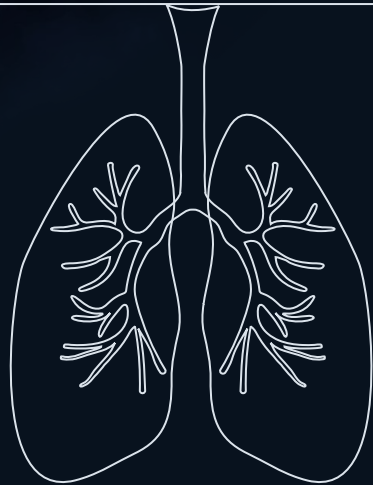
Chest X-Ray Images from Mendeley Data

pulled from

kaggle™



03



Data Preparation

01

Class
Distribution

02

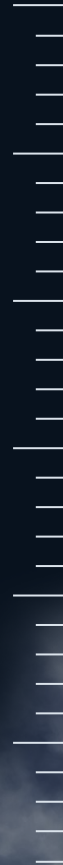
Sample
Visualization

03

Image Size
Analysis

04

Data
Augmentation



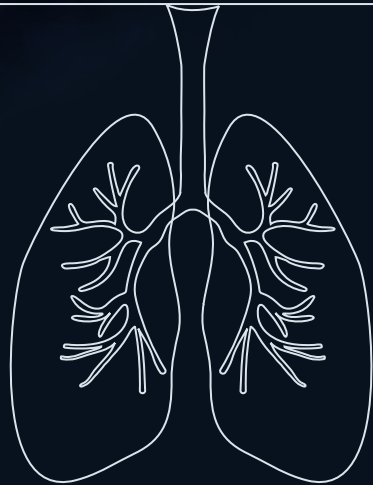
04



Modelling

Eight Models

- **01** • Regularization Techniques
- **02** • Increased model depth
- **03** • Adjusted classification threshold



05

Results

Test scores results:

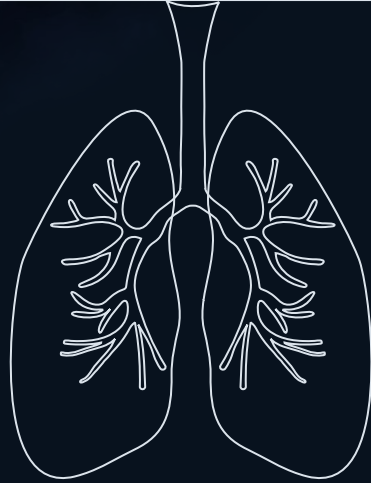
recall - 94%

accuracy - 85%

precision - 84%

True labels	Normal	Pneumonia
	Normal	Pneumonia
Normal	TN 163	FP 71
Pneumonia	FN 23	TP 367

06



Next Steps



01

Address data
deficiencies

02

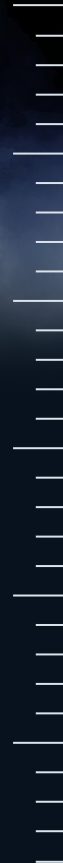
Enhance data
quality &
utilization

03

Expand diagnostic
scope

04

Advance model
training



THANK YOU

Do you have any questions?

Author: Karina Basto Eyzaguirre

 karinabastoe@gmail.com

