





MINOTAUR CONSULTANTS

PNEUMONIA IMAGE CLASSIFICATION

JEN SANS, JENNIFER COBB, TEIGEN OLSON

OVERVIEW

01

Business Problem

02

Data & Model

03

**Results &
Recommendations**

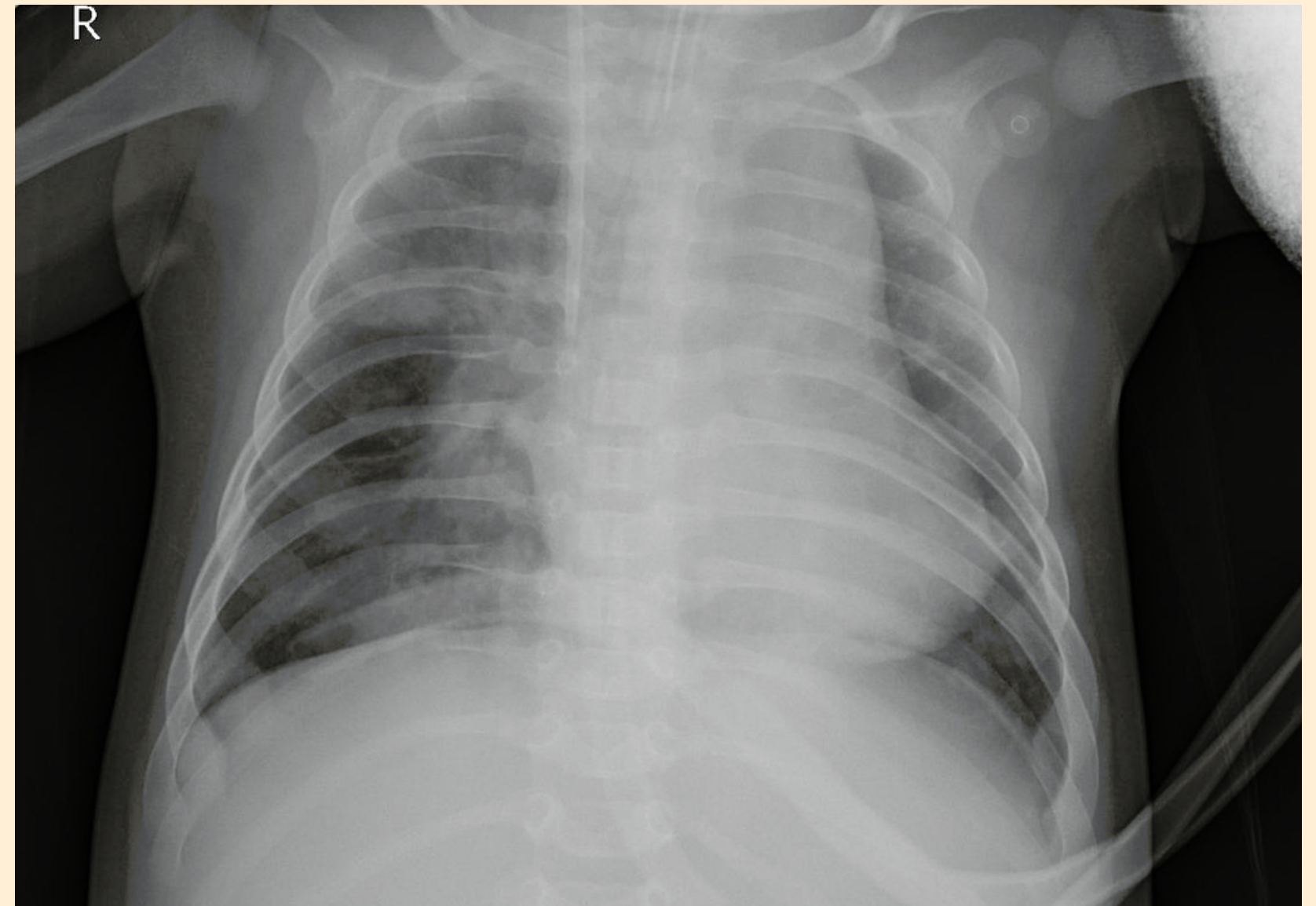
04


Next Steps

BUSINESS PROBLEM



PNEUMONIA X-RAY





WHAT INFORMATION DID WE LOOK AT?

- Pediatric Chest X-Ray Images
- Mendeley Data
- Over 5,800 Images

EXPLORING THE DATA

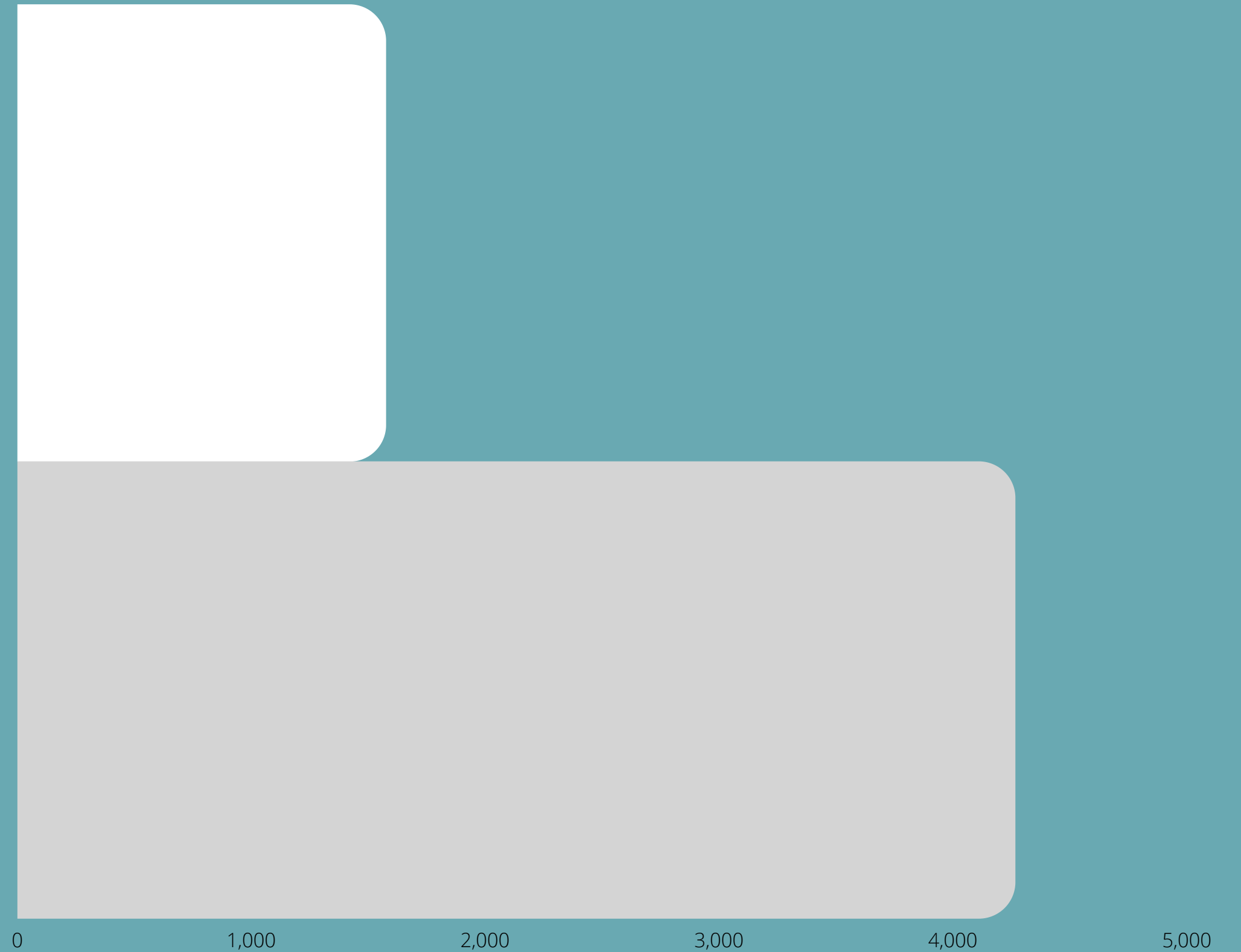


EXPLORING THE DATA

IMAGE COUNTS

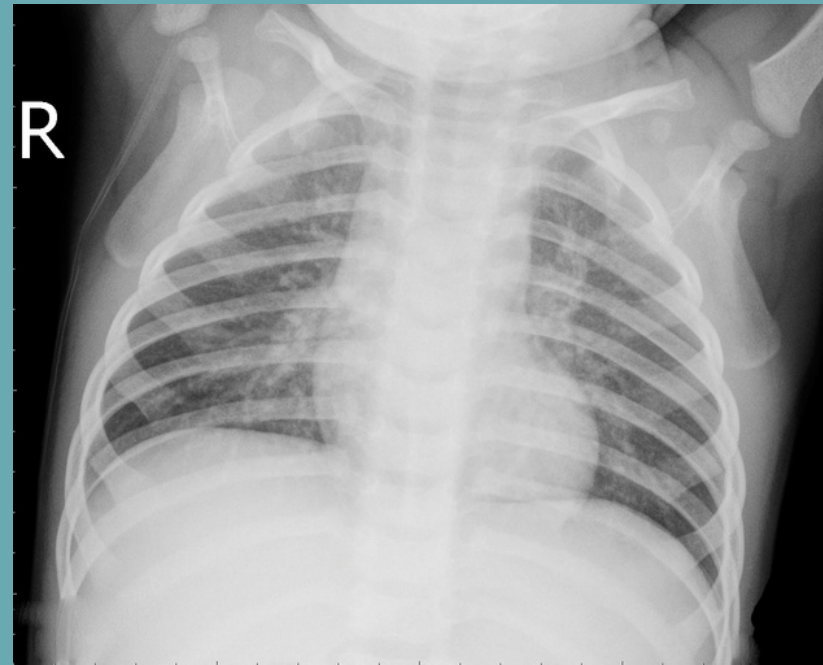
Normal

Pneumonia

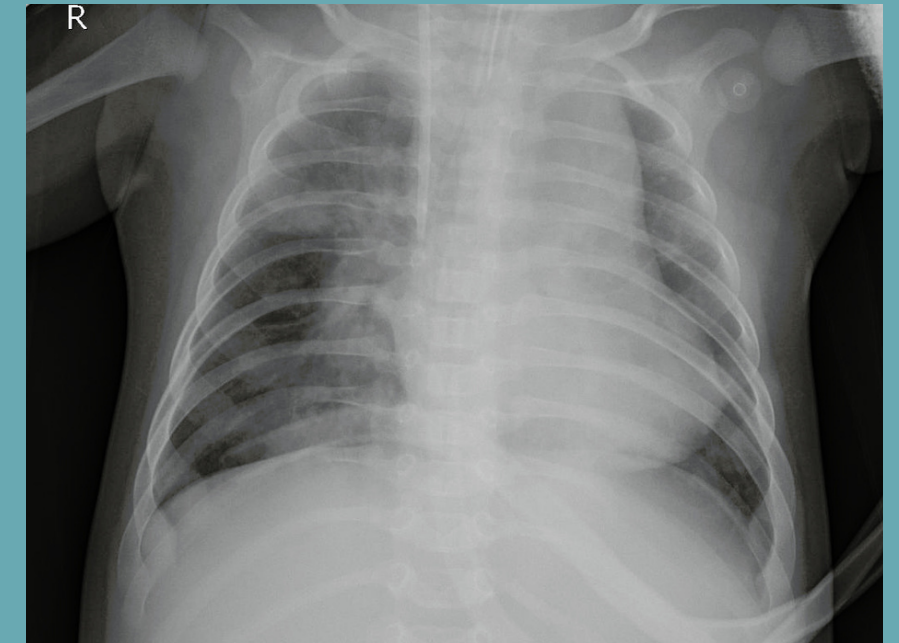


EXPLORING THE DATA

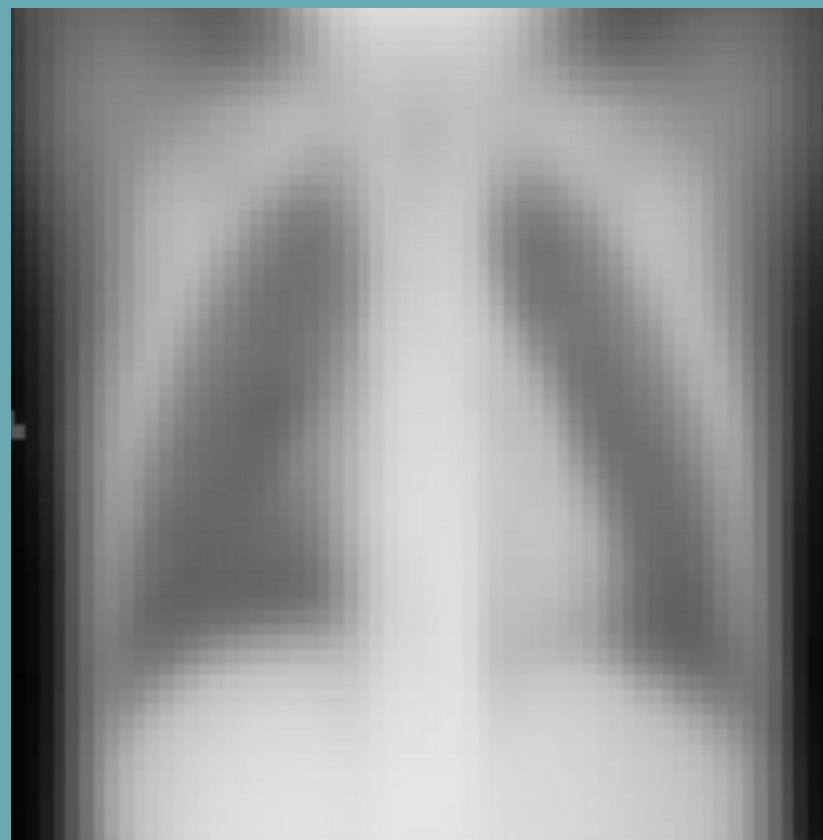
Normal Example



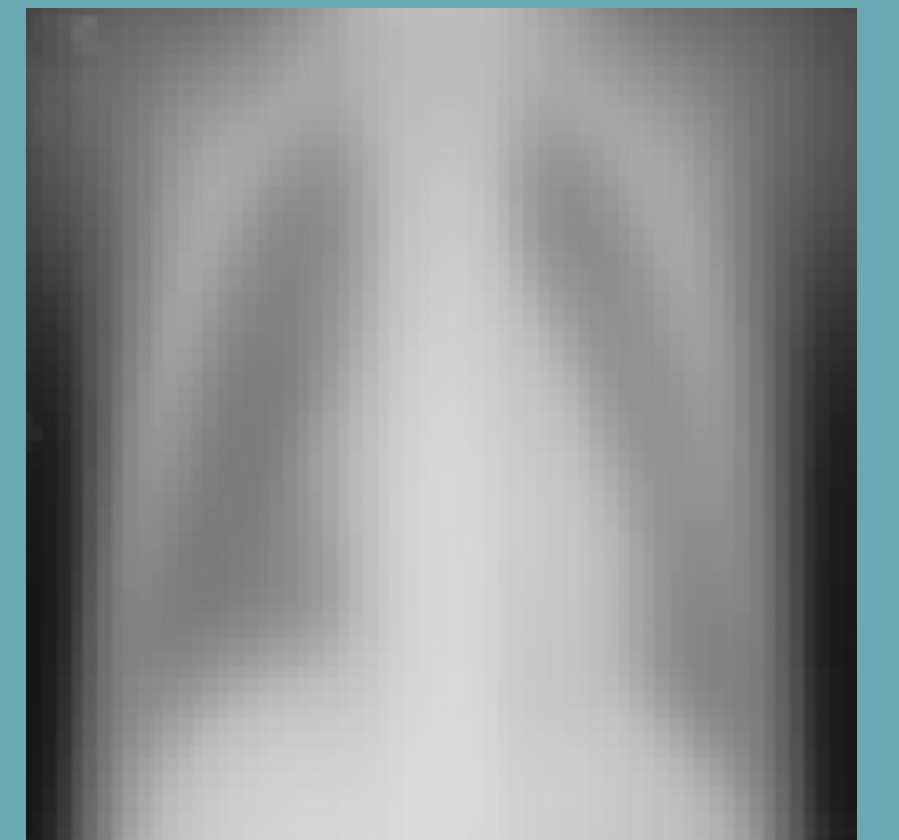
Pneumonia Example



Average Normal



Average Pneumonia



MODEL RESULTS

TRUE

Normal

80%
Actual
Normal

20%
Predicted
Pneumonia

Pneumonia

4%
Predicted
Normal

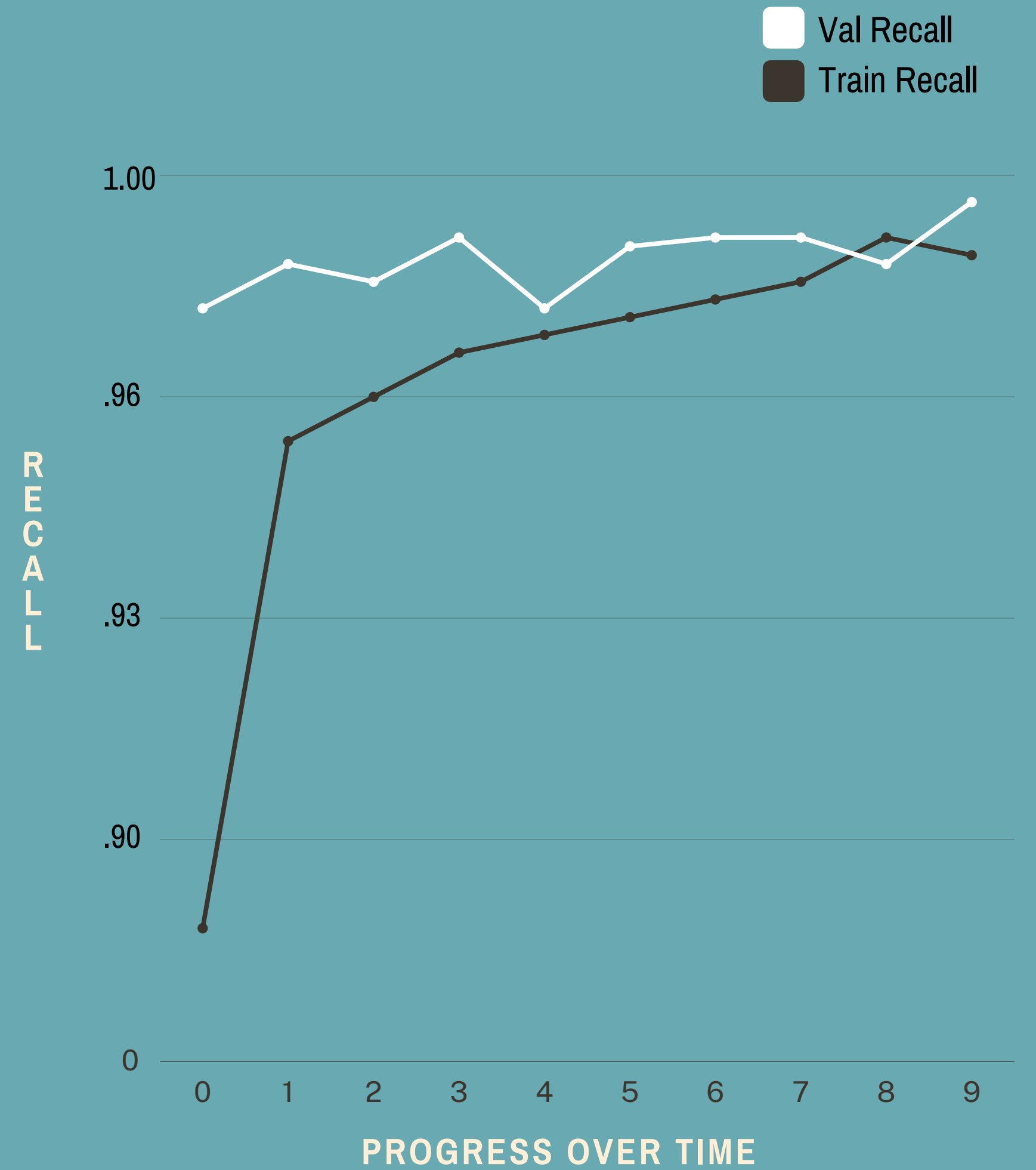
96%
Actual
Pneumonia

Normal

Pneumonia

PREDICTED

MODEL RESULTS



MODEL RESULTS

Accuracy: 83%

Recall: 96%

RECOMMENDATIONS

01
QUICK
RESULTS

02
AT-RISK
PATIENTS

03
EXPEDITED
TREATMENT

NEXT STEPS

01
BACTERIAL
VS. VIRAL

02
BREATHING
RECORDS

03
AIR QUALITY
EVALUATION

THANK YOU



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<https://github.com/teigen30/PNAImageClassification>