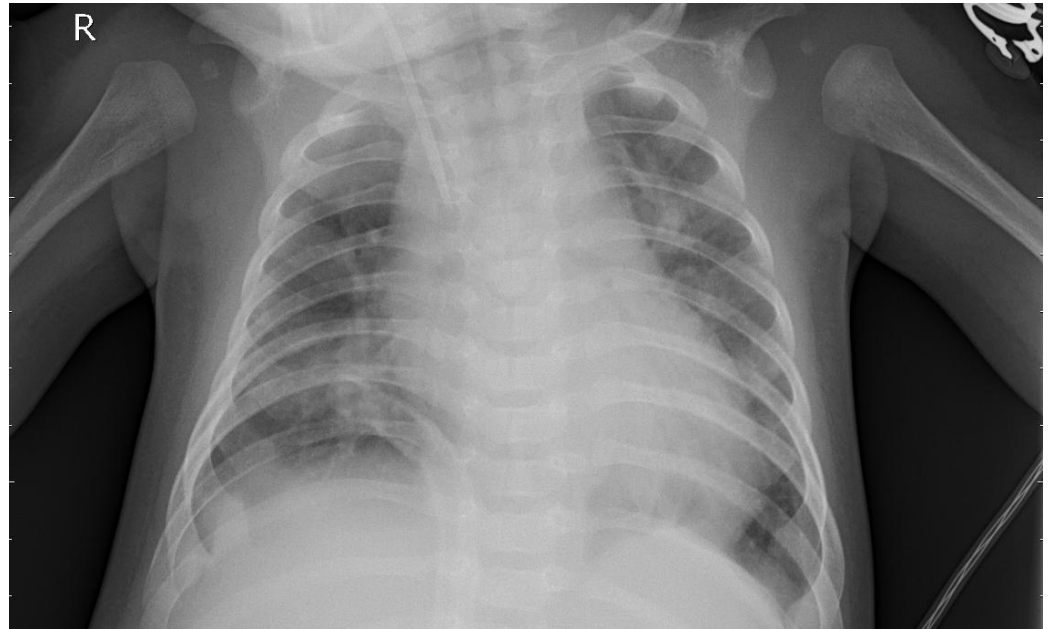# Phase 4 Project
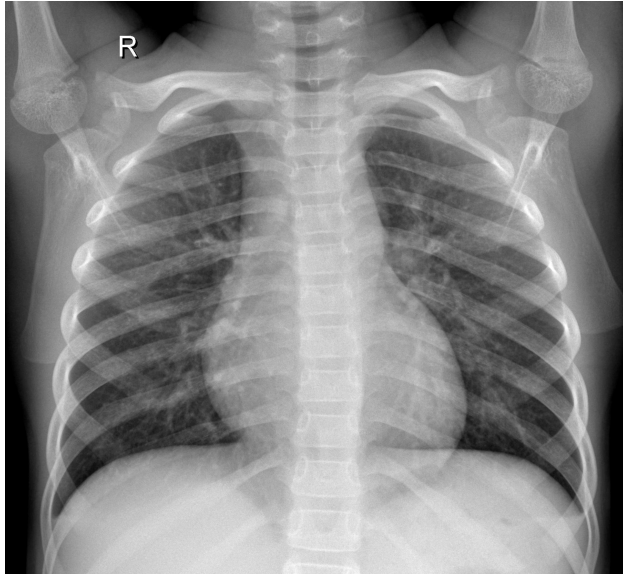
Arkin Satija

Business Application
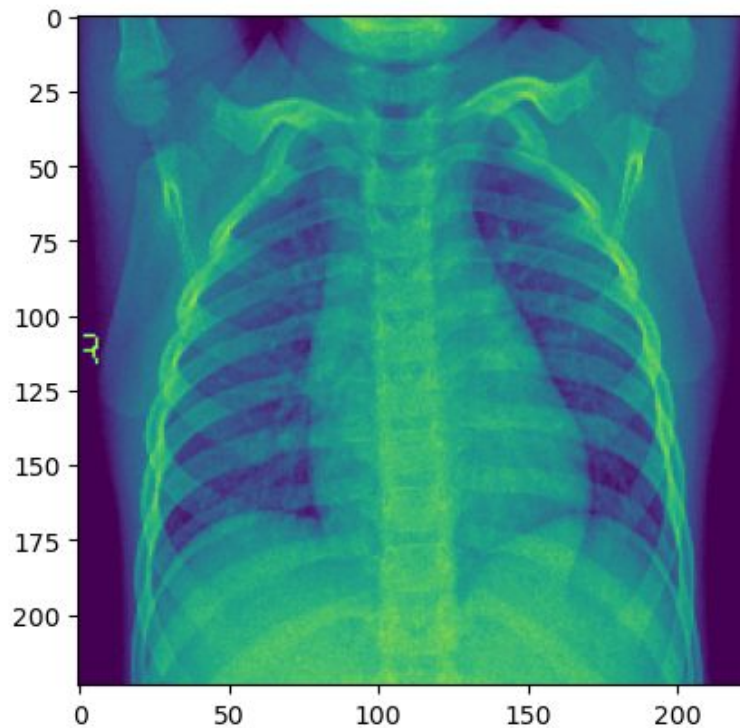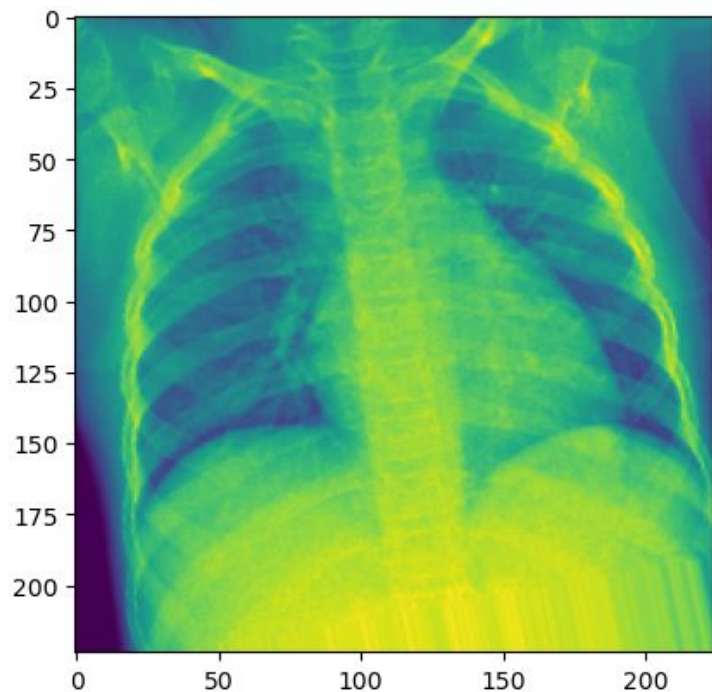
- Pneumonia is bad.

- Health is wealth in 2024

- Doctor's time = $$$

Pneumonia

Pneumonia is inflammation and fluid in your lungs caused by a bacterial, viral or fungal infection.

Image preprocessing

Model

- 0.7644230723381042

```
     model.fit(train_generator, epochs=10)
[14]  ✓  43m 16.8s                                                                    Python

···  Epoch 1/10
     /opt/miniconda3/envs/mac_tf/lib/python3.11/site-packages/keras/src/trainers/data_adapters/py_dataset_adapter.py:121: UserWarning: Your `PyDataset`
       self._warn_if_super_not_called()
     164/164 ──────────────── 175s 1s/step - accuracy: 0.7685 - loss: 1.0465
     Epoch 2/10
     164/164 ──────────────── 217s 1s/step - accuracy: 0.8882 - loss: 0.2575
     Epoch 3/10
     164/164 ──────────────── 237s 1s/step - accuracy: 0.9096 - loss: 0.2216
     Epoch 4/10
     164/164 ──────────────── 239s 1s/step - accuracy: 0.9044 - loss: 0.2269
     Epoch 5/10
     164/164 ──────────────── 247s 1s/step - accuracy: 0.9174 - loss: 0.2031
     Epoch 6/10
     164/164 ──────────────── 237s 1s/step - accuracy: 0.9304 - loss: 0.1742
     Epoch 7/10
     164/164 ──────────────── 397s 2s/step - accuracy: 0.9246 - loss: 0.1900
     Epoch 8/10
     164/164 ──────────────── 449s 3s/step - accuracy: 0.9224 - loss: 0.1959
     Epoch 9/10
     164/164 ──────────────── 190s 1s/step - accuracy: 0.9390 - loss: 0.1553
     Epoch 10/10
     164/164 ──────────────── 208s 1s/step - accuracy: 0.9441 - loss: 0.1414

···  <keras.src.callbacks.history.History at 0x16939eb10>
```

Model

- 0.9995884

Improvements

- Validation data

- Better parameter tuning

- Professional Medical Experience

Thank you

My name is **Arkin Satija** and I am an aspiring Data Scientist.

You can reach out to me on linkedin:
https://www.linkedin.com/in/arkin-satija-b78446201