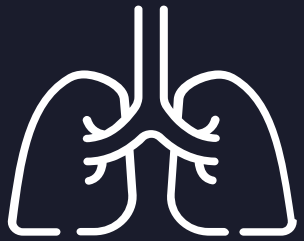
Imagine...

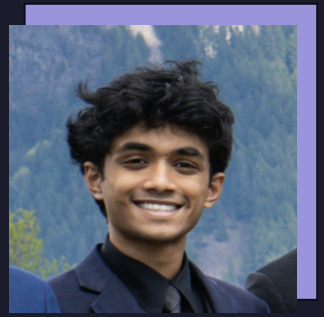


HUGO.AI

Healthcare Utility for Guided Outcomes

Meet the Team

Sanya Oak



Faris Shaik

Arrio Gonsalves

Shaik Hatim

Varun Raghuram

Mentors

Poorna Bharanikumar

Anusha Saha

7.6 million

Chest-Pain Related ER visits
In the US Per Year

Shortage of Over

35,000

Radiologists by 2024

Key Numbers

Abnormalities

Up to 30% of abnormalities can be missed by radiologists on x-rays and scans

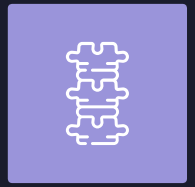
Malpractice

Due to missed diagnosis, malpractice against radiologists accounts for 44% of claims

Mission + Vision

Mission

Help ease the strain on medical personnel in hospitals and emergency rooms



Vision

A web app for users to input a chest x-ray, and AI is used to give information regarding the x-ray

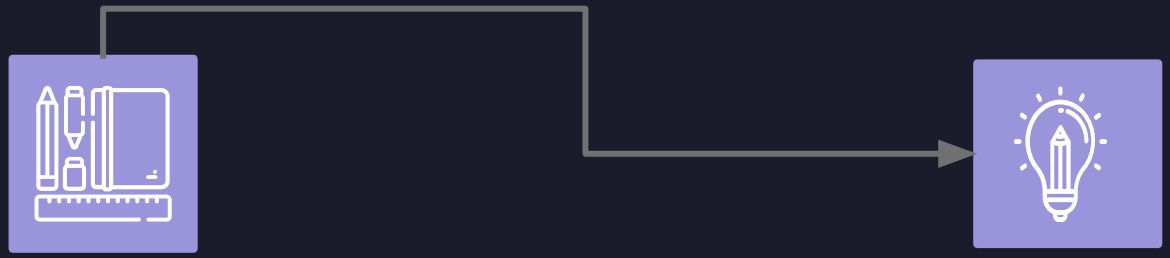
Our Process

Research

- CNN Model
- Kaggle Dataset
- Notebook Environment

Understand

- How to build a model
- How to process data



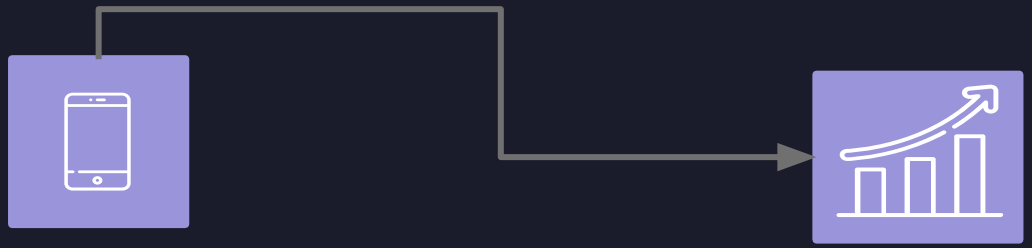
Our Process

Train

- Train the model to bring the accuracy of each model higher, each time

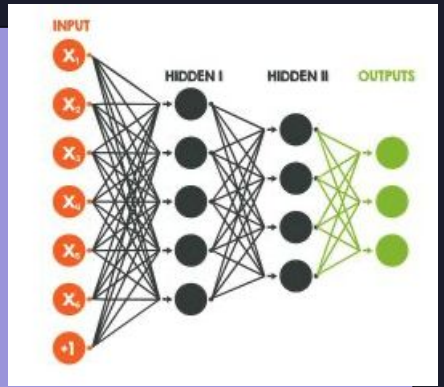
Build

- Integrate it all together
- Web app for users to use



Data and Training

National Institutes of Health



Models	Training Accuracy	Testing Accuracy	Prediction Time
ResNet18	0.9719	0.84	1131 s
ResNet50	0.9811	0.98	1396 s
ResNet101	0.982	0.98	1844 s
ResNet152	0.9876	0.98	2131 s

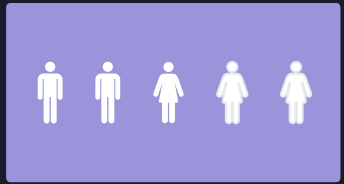
Our ML Models

Pathological Conditions Classifier

Detects medical abnormalities in the X-ray

Gender Classifier

Detects whether the patient is a male or female



Our ML Models

Age Classifier

Detects if the patients are adults or children

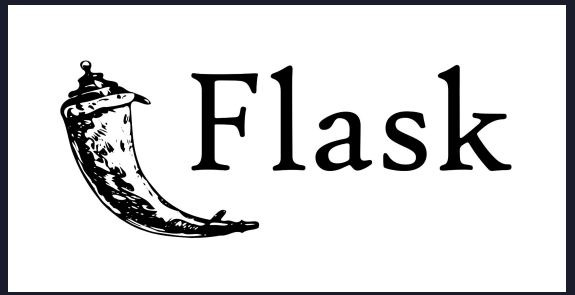
View Classifier

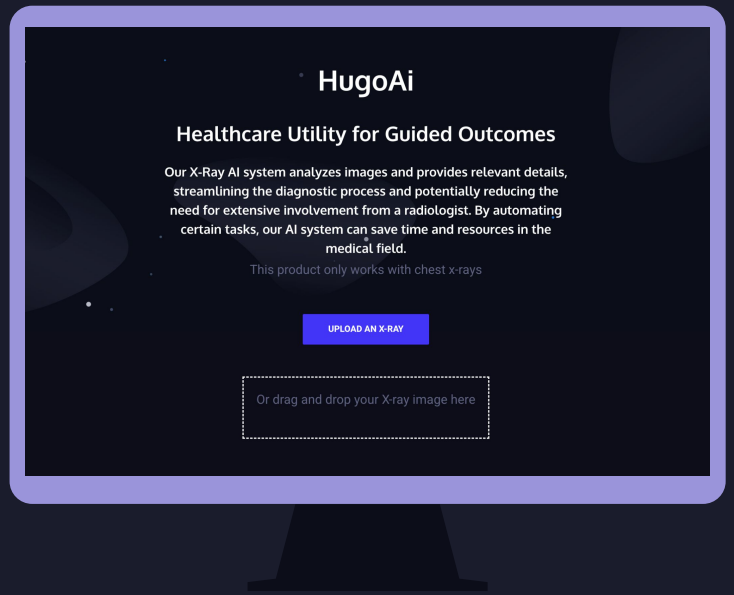
Detects if the X-Ray is in anterior or posterior view

93.4%

Average Accuracy Across 4 Models

Tech Stack





Demo

HugoAi.cc

Further Implementations

Go further than chest X-rays

- X-rays of Other Body Parts
- CT scans
- MRIs

Web App Accessibility

- Readily available to ERs and Urgent Care Centers
- Patient Portal Integration

Thank You

Try It Out!