AI ASSIST FOR CHEST X-RAY DIAGNOSIS

Check out the repository

MEDTECH VISIONARIES

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ENGINEERING

Computing & Software

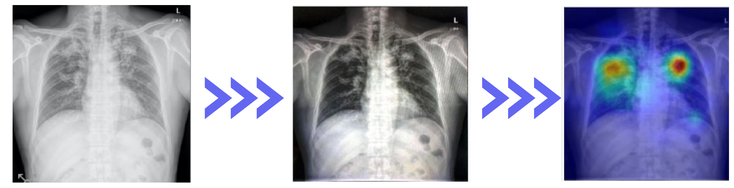
- Uses CNN model trained on multiple datasets like MIMIC-CXR, CheXpert, NIH

MIMIC + CheXpert + NIH =

NOTABLE QUALITIES

- Designed to support DICOM X-ray images
- Intuitive Interface and enhanced data security

- Visual interpretation through heatmaps



MOTIVATION

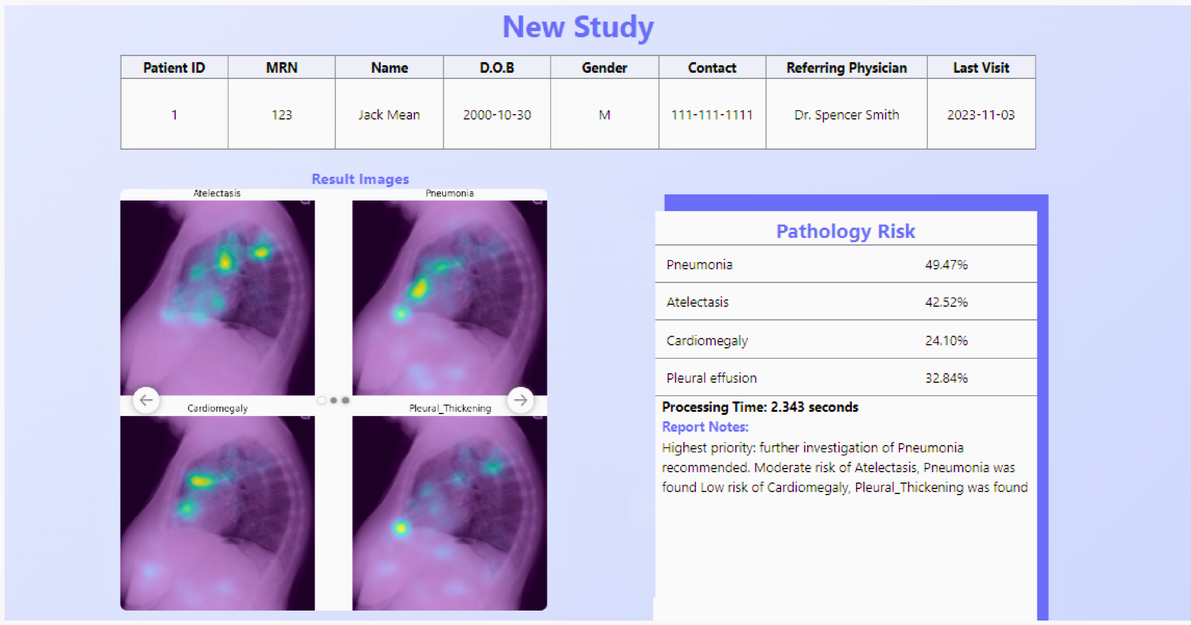
- Chest X-Ray (CXR) Imaging is a widely and frequently used diagnostic tool
- Billions of chest X-Rays are performed but the number of healthcare professionals are limited
- Interpretation can be time-consuming and prone to errors.
- Timely detection can impact patient outcomes and save costs

OUR VISION

Develop a robust, reliable and user-friendly AI-powered system to assist healthcare professionals in analyzing X-Ray images and generate diagnosis of various diseases; enabling faster and more accurate diagnosis; ultimately improving patient outcomes.

DISEASES ANALYZED

Atelectasis | Pneumonia | Pleural Effusion | Cardiomegaly



React Firebase PyTorch GitHub

FEATURES

- Automated analysis of chest X-Rays for detection and prediction of diseases
- Generation of attention maps for visualizing each finding
- Generate a brief summary of the diagnosis
- Seamless integration with existing databases
- Intuitive and user-friendly interface

FUTURE WORK

- Including an NLP Model to take diagnosis/prediction results and generate a radiology report
- Increase the number of diseases analyzed by the model