

MED-X AI

Thorax Disease Detector

BY: Med-X (Team 1)
CS691
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Team Roles and Responsibilities



Ronaldo Simbaña
Scrum Master | Developer



Marla Capistran
Team Leader | Database Admin



Filippo Zallococo
Developer

Team Roles and Responsibilities



Christopher Ospina
Developer



Anthony Muñoz
*Quality Assurance / Tester
Developer*



Leanna Machado
Developer

Team Roles and Responsibilities



Rahul Nayangali
Developer



Prithvi Raimangya
Designer | Developer

Improvements

- Product Backlog placement (slides 39 - 42)
- User Stories as Product Backlog (slide 39-42)
- Change User ID to User Story ID (slides 39-58, 68-70)
- Include a Test Case ID (slides 54-57)
- Indicate Pass and Fail ratio of Test Cases (slides 57)
- Burndown Charts use story points instead of hours (slides 60,61)
- Dot Voting during the Retrospective

Star indicates an improvement made





Problem Statement

Currently, x-ray machines are widely available; however, clinical chest x-ray images can be challenging to read and diagnose. Furthermore, x-rays are not a priority for radiologists, as they tend to focus more on CT images and MRIs. CT scans are both harmful and expensive, in addition to being time consuming.



Project Description

- A web app that has a highly trained deep learning model that classifies x-ray images, reducing the need for a radiologist to examine them
- Intended for medical professionals and patients who upload x-ray chest images
- Uses a deep-neural network models that will detect common health issues
- Our application will reduce the time it takes for a patient to receive their diagnosis using AI



MED-X AI

Project Description

Product Description	
Project Name:	Med-X AI
Team:	Med-X
Project Description:	<p>The Common Thorax Disease Detector is a web app that has a highly trained deep-learning model that classifies X-ray images, reducing the need for a radiologist to examine them.</p> <p>For medical professionals and patients who upload x-ray chest images the Med-XAI app is an application that uses a deep neural network model that will detect common chest health issues rather than having to wait for a radiologist to examine X-ray images that are not a priority for them our application will reduce the time it takes for a patient to receive their diagnosis by using AI</p>
Benefit Outcomes:	
	<ul style="list-style-type: none">• Faster physician response rate to patients.• Cost-effective solution by reducing the need to hire more professionals.• Utilize AI to reduce human errors and efforts.• Partially automating the chest x-ray review process.• More accessibility to the patients.• Improve physician workflow.
Github Link:	https://github.com/htmw/2024S-Med-X



Team Working Agreement

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Team Working Agreement

To ensure the smooth and successful completion of the Computer Science Capstone Project, the Med-X team must comply with the following expectations. As a team, we will commit to being transparent and accountable with our project responsibilities, be honest and straightforward when it comes to project plans, timeline, and progress, be proactive in trying to foresee and avoid difficulties, take initiative in tasks where a member's skills are capable, prioritize the overall success of the project, and follow through to the end.

Terms of Agreement:

Communication

The team will communicate with each other through various methods. For weekly meetings for meaningful team discussions, zoom meetings will be used. All team members are encouraged to keep their cameras on in order to build trust between the team and reflect transparency.

Comments, questions, quick discussion, and emergencies are to be communicated through a Whatsapp messenger group chat.

To share the final deliverables, share resources, and take notes, Google Docs will be used where all the team members can edit the document. Files and other resources that are not suitable to be posted on Google Docs will be uploaded on OneDrive. This includes recordings of weekly team meetings, Microsoft Word documents and PowerPoints.

A platform called ClickUp will be used to keep track of tasks, assignment due dates, and scheduled meetings. Members are assigned to tasks, where the status can be changed to show progress and viewed as a timeline. This platform assists in project management efficiency.

In all discussions within the team, members are expected to actively listen, remain focused on the topic at hand, and utilize visuals to help with the conversation.

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Work Division and Participation

The entire project work should be divided into equal parts, and equal responsibilities should be given to all the team members. Members are expected to select and contribute to tasks in which their skills are best fit.

Each team member should complete their division of work before the class deadline and by the team's scheduled date. If work is unable to be completed on time, that hinders the performance of the entire team. In any case a team member is facing difficulty or issues with completing tasks, they are expected to share it with the team so that they can help each other and complete the work before the deadline.

All the team members are expected to attend the scheduled meetings promptly. All members should show respect, share feedback and suggestions, and share skills and knowledge that would assist in the progress of the project.

Absence during multiple meetings will affect the team's performance and efficiency. The team member can discuss beforehand with the team if he/she is going to miss the meeting. Meetings will be recorded, therefore members who miss a meeting are expected to watch the recording.

Work is divided between members of the group voluntarily. However, if members lack participation, the team leader is permitted to assign necessary tasks to absentee members.

Meetings

All the team members will meet on zoom virtually every week. Meetings will occur 3 times a week on Mondays, Wednesdays, and Fridays at 5 pm. Exact dates and times are verified in the previous meeting. This ensures flexibility to accommodate everyone's schedules and a greater likelihood that all members can attend. All the team members must be present, unless for exceptional cases that are communicated to the team.

The team leader would be responsible for initiating and monitoring project tasks and assignments. The scrum master is expected to lead and monitor sprints and daily scrums.



Team Working Agreement

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The status of tasks and meeting notes on ClickUp will be added and updated after every meeting to keep track of the project and its progress.

Every team member is expected to come up with ideas, participate in the discussion, and give an update on their progress for their part of the work.

In case a member is absent during a meeting, that member pledges to support whichever decision is approved during that meeting. They are also expected to watch the recording of the meeting and ask any questions to clarify what they have missed.

Respect

It is essential that all members have a chance to share their opinion and make any suggestions without judgment. The project is a team effort where all members work together, taking advantage of our collective knowledge to come up with solutions and confront problems that may arise. Data will be used to inform our decisions whenever possible.

All members agree to respect each other's personal schedules and listen to each other's perspectives with an open mind.

Team Member	Email
Marla Capistran	mc08144p@pace.edu
Leanna Machado	lm77202p@pace.edu
Anthony Munoz	am15943n@pace.edu
Rahul Nayanegeali	rn06857n@pace.edu
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Prithvi Raimangya	pr21243n@pace.edu
Ronaldo Simbana	rs77853p@pace.edu
Filippo Zalocco	fz46756n@pace.edu

Patient Persona

Harold Castillo



Age: 55

Gender: Male

Occupation: Restaurant Owner

Location: Red Bank, NJ

Harold gets regular check-ups for a man his age but has trouble scheduling due to his job. It'd be great if he could just view his results and get an idea of what they mean and potential next steps without having to keep going in person.

Goals

- View reports/results online
- Able to connect with doctor about results online
- Simple site for ease of use

Challenges

- Making it to follow-ups for results
- Understanding the results, even after a consultation
- Time taken to receive results

Radiologist Persona

Sandro Cuccigno



Age: 50

Gender: Male

Occupation: Radiologist

Location: Manhattan, NY

Hospital: NYU Langone Medical Center

Has been in the practice for 20 years. His team is understaffed and under equipped. Is often exhausted from reviewing x-rays and informing people they have a serious illness.

Goals

- Process chest images fast
- Help hospital tend to patients
- Improve workflow for his team

Challenges

- Increasing patient volumes
- Burnout from long shift and nature of the job
- Facility cutting funds
- Spends many hours reviewing x-rays

Doctor Persona

Dr. Bryce Ruiz



Age: 34

Gender: Male

Occupation: Doctor

Location: Fresno, Ca

Hospital: Albuquerque Medical Center

A 34-year-old medical professional from Fresno. Has been working at Albuquerque for over 10 years and has recently been promoted to Cardiology to conduct x-rays

Goals

- Build a strong reputation with patients
- Explain to patients what they have in a clear manner

Challenges

- Large volume of patients
- Limited time for consultations
- Patients are often confused about their diagnosis



Product Discovery

The image displays four wireframe prototypes of a medical AI application, likely created using Figma or a similar tool. The prototypes are arranged side-by-side against a dark background.

- Wireframe 1: Upload Screen**

A simple form with a placeholder image of a person, a status bar, and a large central input field labeled "UPLOAD X-RAY HERE". Below the input field are "SUBMIT" and "FINDINGS" buttons. A detailed description of Pneumonia follows.

FINDINGS
Diagnosis: Pneumonia
Area of Interest: Chest
Stage: 1
Definition: Pneumonia is inflammation and fluid in your lungs caused by a bacterial, viral or fungal infection. It makes it difficult to breathe and can cause a fever and cough with yellow, green or bloody mucus.
- Wireframe 2: Patient Dashboard**

A dashboard for patient "John" (represented by a black circle). It shows a greeting "Good morning John!", a file upload section ("Drag files to upload or Browse Files"), and a progress bar with three stages: "In Progress", "Under Review", and "Reviewed".

Diagnosis:
Pneumonia

Description:
A respiratory infection that affects the lungs by filling up the small sacs with pus and fluid

Doctor's Message:
February 8, 2024
John your next steps are ...
Please visit the clinic this week
- Wireframe 3: X-Ray Overview**

A screen titled "Med X AI" showing an "Upload X-Ray Image" section with a "Drag & Drop a file" area and a "Browse Files" button. A horizontal progress bar indicates the status from "In Progress" to "Under Review" to "Reviewed".

Result
Description
Thorax Disease
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Doctor's Notes
- Wireframe 4: Main Dashboard**

A comprehensive dashboard titled "Med-X Dashboard". It includes filters for "Date Range" (set to "This Month") and "Type of Scan" (set to "MRI"). There are three large, empty placeholder boxes for visual data. A "Filter View" dropdown is set to "Line Chart". A prominent "Upload a new Scan" button is at the bottom.

Wireframe 5: X-Ray Overview Detail

A detailed view of an X-ray overview for a patient named "John". It shows a sidebar with "Patients Information" (Age, ID) and "Upload X-ray image" options. The main area displays "X-ray Findings" (Last checked 2 Days Ago, Inverted Trachea Body Shape), "Doctors Opinion" (Pending), and "Doctors Information" (Pending).



Final Product Design

A smartphone is shown from a slightly elevated angle, displaying the Medexer mobile application. The screen has a dark background with a light gray header bar at the top containing a search bar, a notification bell icon, and a user profile picture. The main content area features the MED-X AI logo and the word "Medexer". To the right, the text "X-ray ID: #234456" is displayed above a large, semi-transparent purple-to-green gradient bar. Below this bar, the word "Reviewed" is shown next to a small info icon. The central part of the screen shows a chest X-ray image of a ribcage and lungs. To the left of the image, the word "Results" is displayed above the diagnosis "Hernia". A detailed description of the findings follows: "Descriptions: Identification of a diaphragmatic hernia noted on the chest X-ray. The presence of abdominal contents protruding through the diaphragm into the thoracic cavity is observed. This herniation appears to be located hemidiaphragm. Clinical correlation and further imaging modalities may be warranted for comprehensive evaluation and management." To the right of the description, the date and time "03/31/2024 4:30 pm" are listed. Below the description, the heading "Doctors Comments:" is followed by the placeholder text "Horem ipsum dolor sit amet. consectetur adipiscina elit." To the right of this, another date and time "03/31/2024 4:30 pm" are listed. At the bottom of the screen are two buttons: "Download Report" and "Upload New Scan". On the left side of the phone, a vertical navigation menu is visible, listing "Dash Board", "Medexer", "Reports", "Connect", "Settings", "About Us", and "Terms & Conditions", each preceded by a circular icon.



MED-X AI

MVP Design

Report



Results
Hernia

18th January 2014 4:30pm

Search

Dash Board

MED-X AI

Search

MED-X AI

Dash Board

Medxer



Drag & Drop to Upload Chest X-ray

Browse File

Supported File formats: .png, .jpeg, .svg



Technologies & Algorithms

Programming Languages and Frameworks



HTML5



CSS



JavaScript



React



Node.js



Flask



Python



Tailwind
CSS

Algorithms



TensorFlow



CNN



Keras

Database



Firebase



Figma



VSCode



Docker



GitHub



Insomnia



Technologies Explanation



HTML5



CSS



JavaScript



React



NodeJS



Tailwind
CSS

MedX app leverages HTML, CSS, JavaScript, React, Node and Tailwind CSS for the dynamic user interface



Flask



Python



Firebase

Python's micro framework Flask is used to render the chest x-ray findings on the user interface by calling the trained model

Firebase is used to store the uploaded image and provides an endpoint URL to call the API

Technologies Explanation



Figma



VSCode



Insomnia

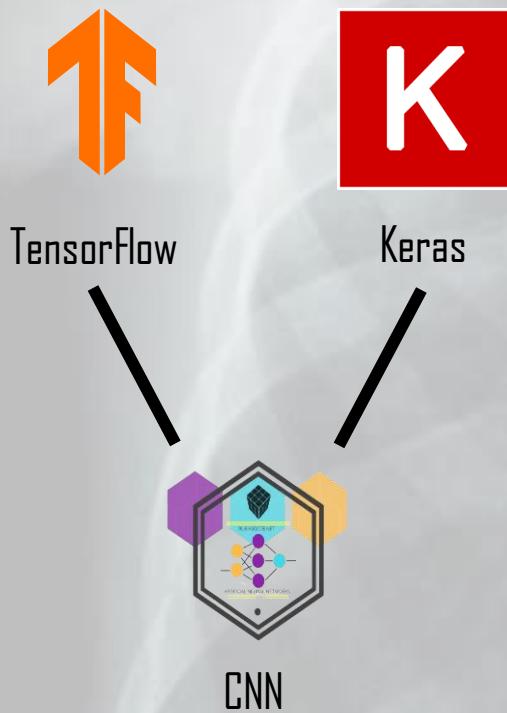


Docker



GitHub

Figma, VSCode, and GitHub are tools used for efficient collaboration. Figma enables a seamless contribution for the overall development. VSCode is the chosen code editor. GitHub allows remote version control and collaborative development. Docker simplifies deployment across all platforms. Insomnia is a tool used to test the APIs.



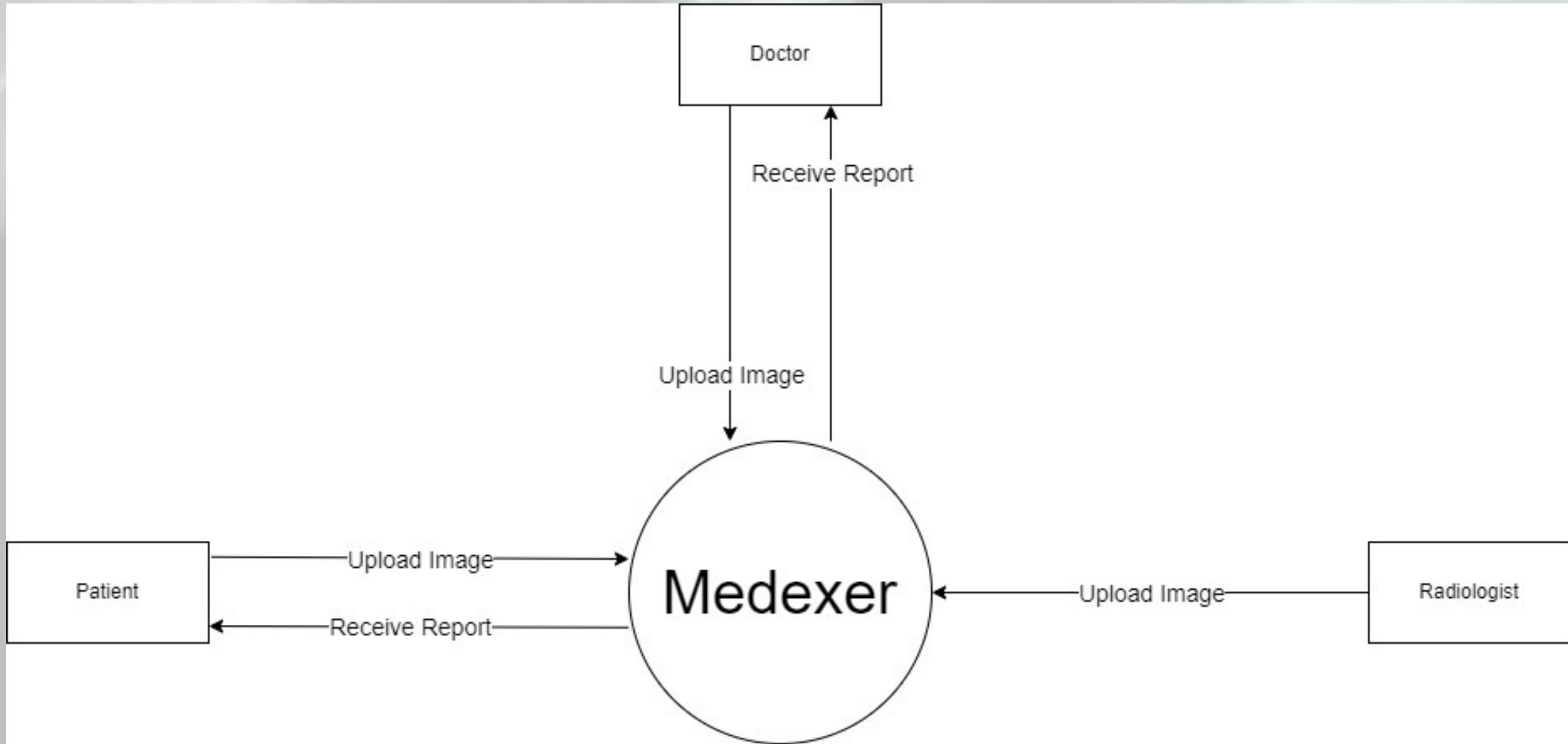
Algorithms Explanation

TensorFlow's Keras API is used for building and training our Convolutional Neural Network, which classifies x-ray images for diagnosis. The deep learning model integrates different layers.

- Convolutional Layers
- Batch Normalization
- Dropout
- Regularization

We optimized training with the Adam algorithm

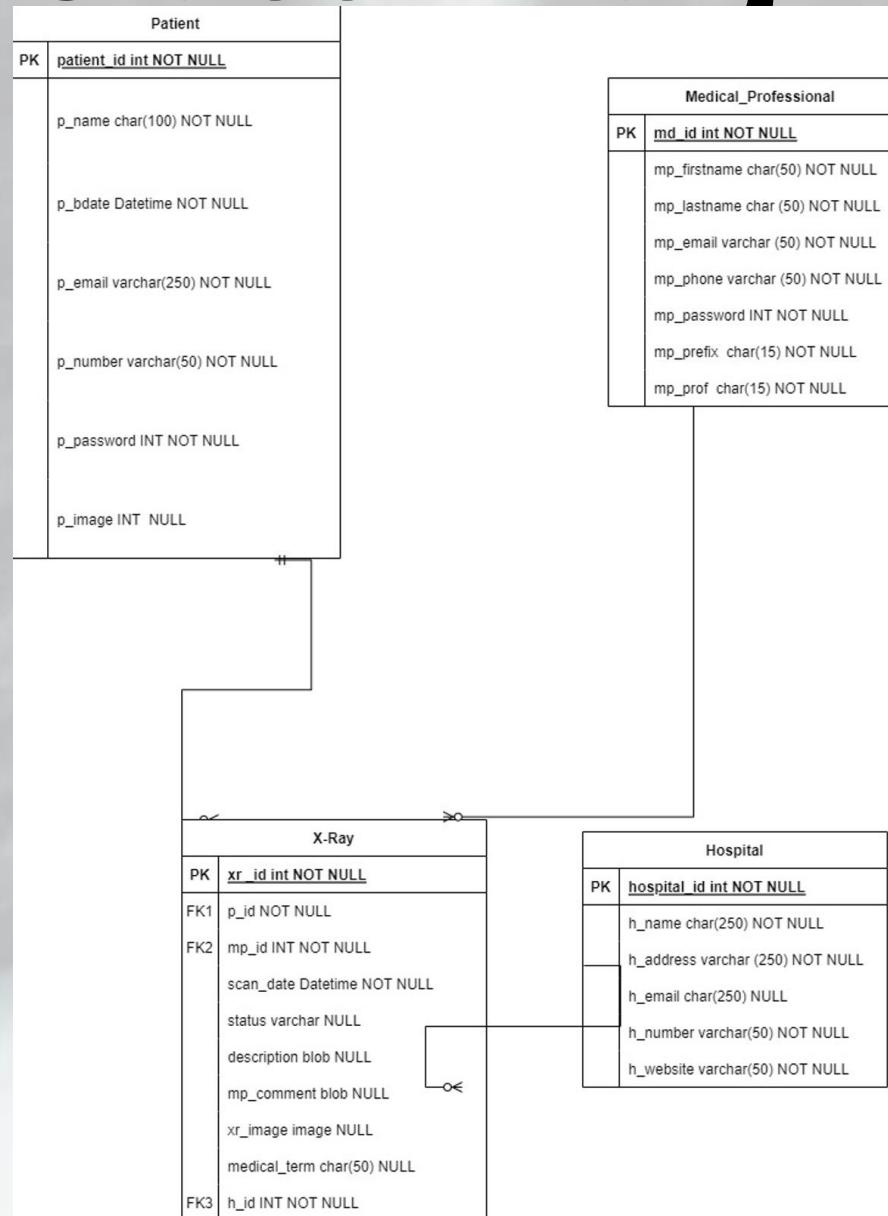
Context Diagram





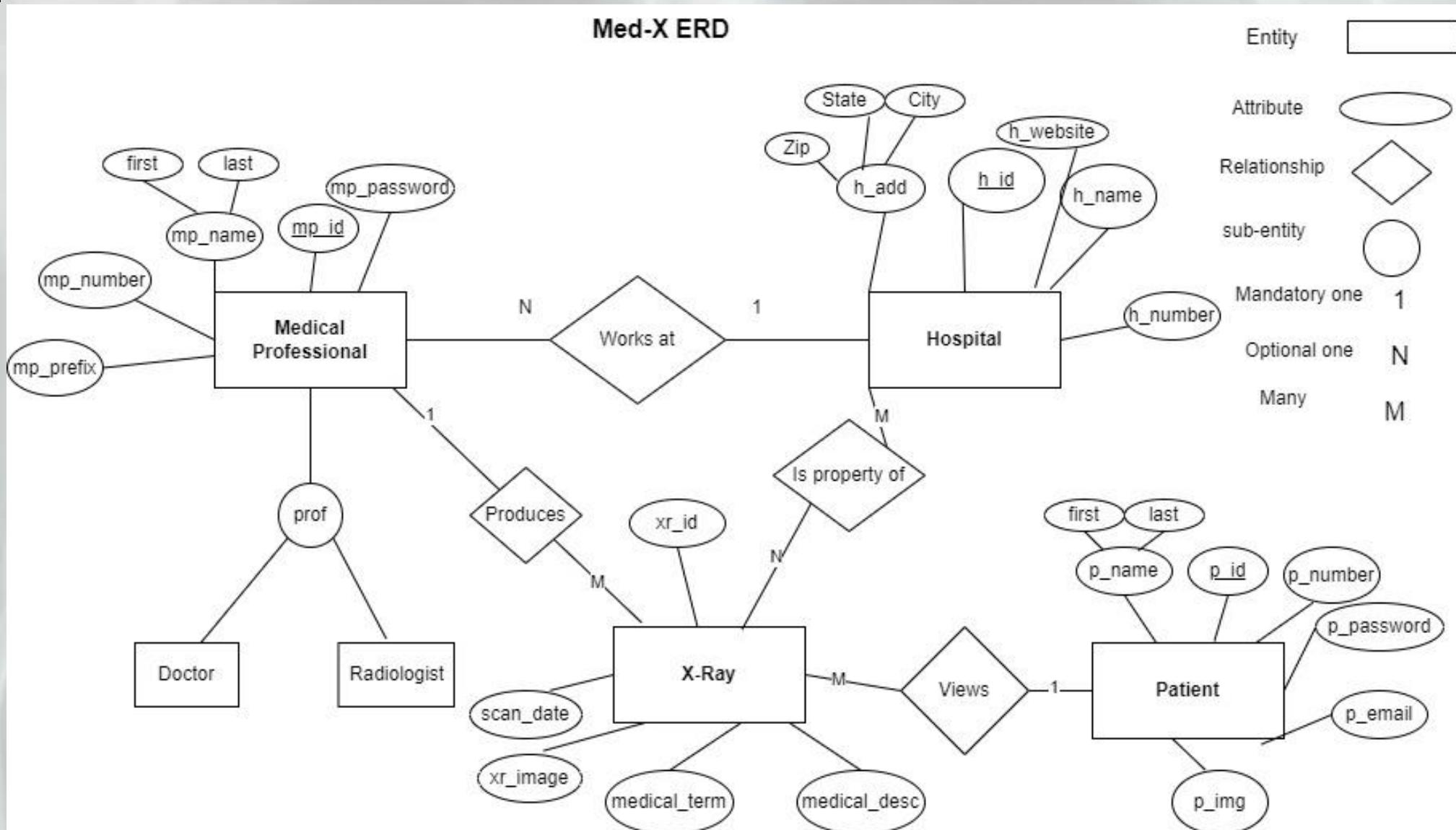
MED-X AI

Class Diagram

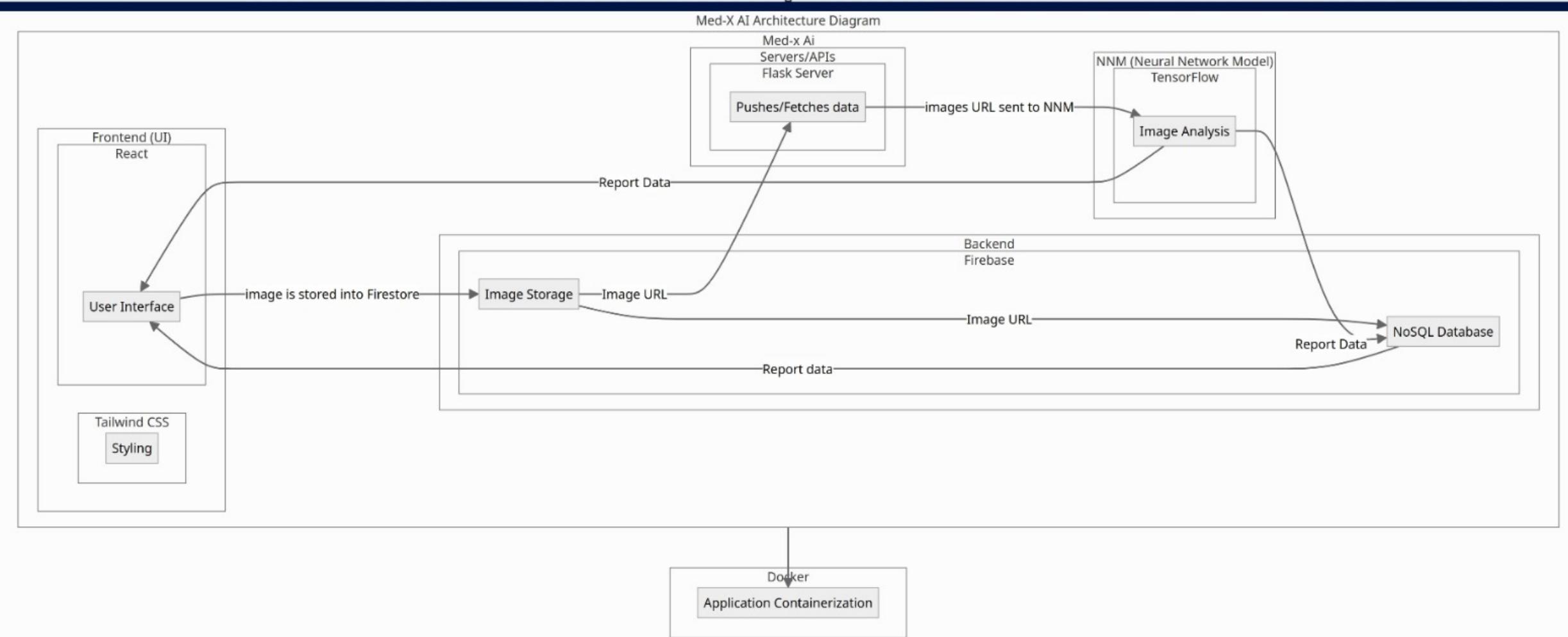




ER Diagram

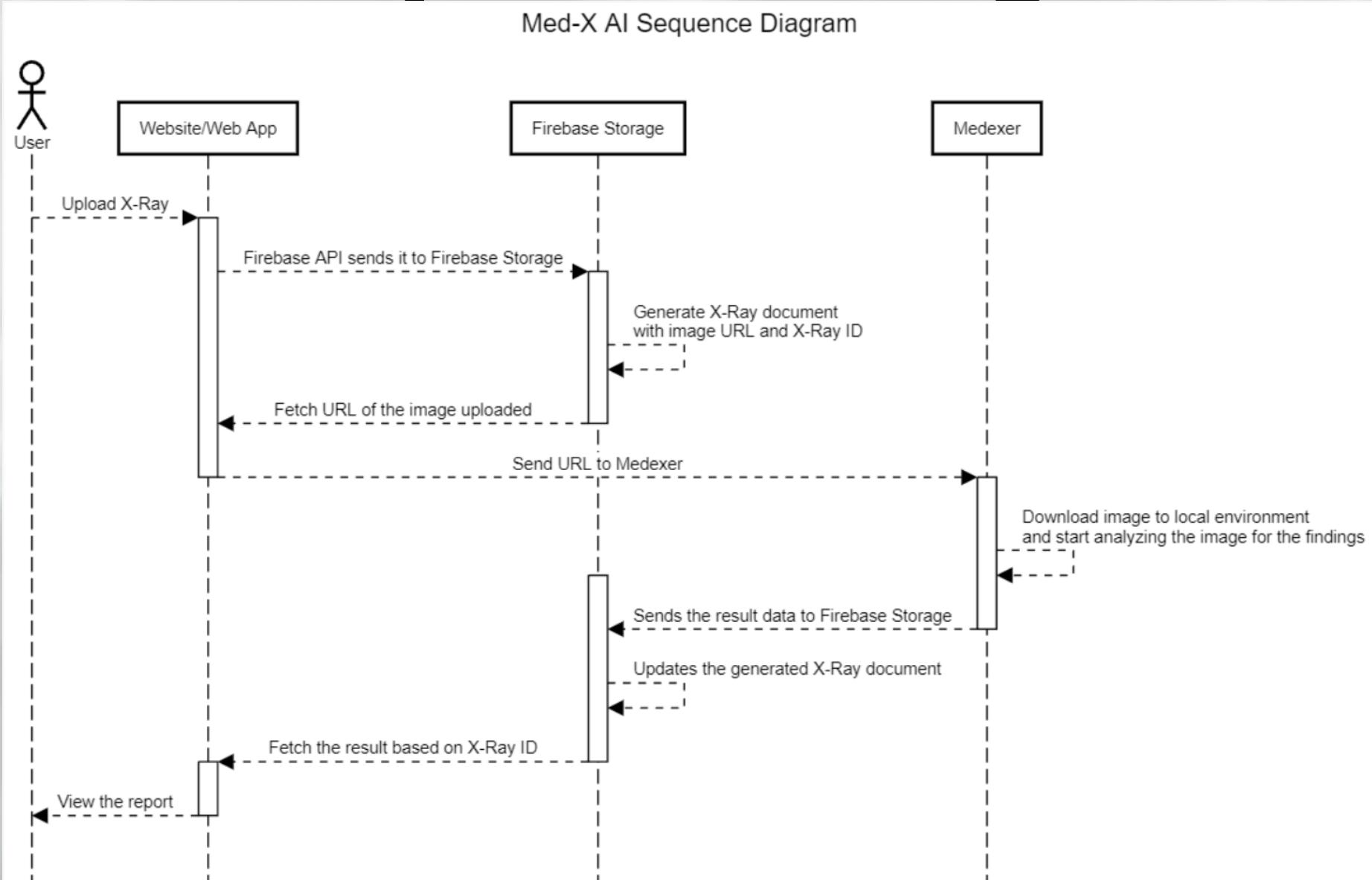


Architecture Diagram



Sequence Diagram

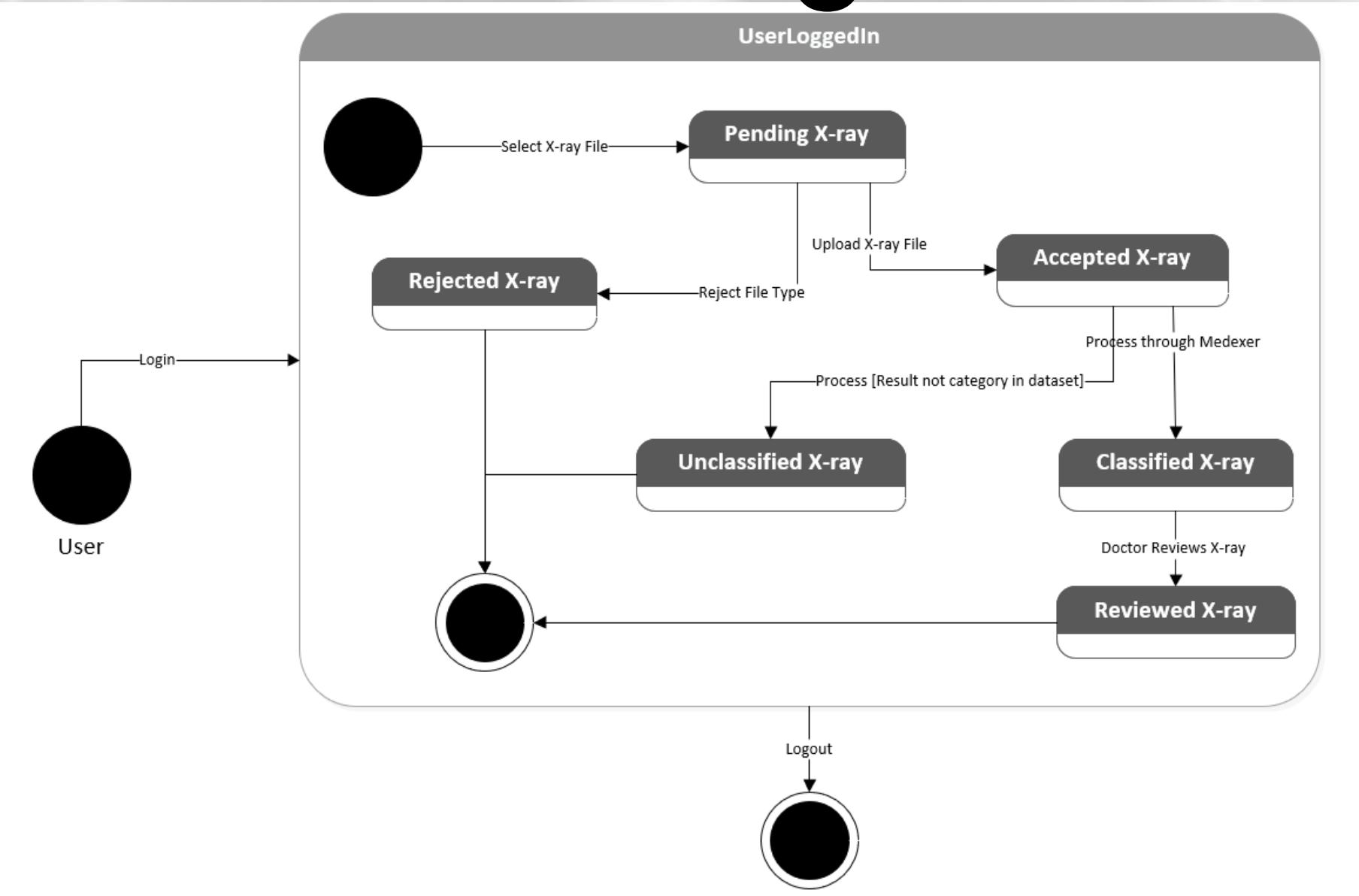
Med-X AI Sequence Diagram





MED-X AI

State Diagram





Sprint 2 Recap

- Designed the UI for the Search bar
- Image Upload and Submission to Firebase
- Medical Term Result
- Loading Page
- Created Database Tables
- Alert message after submitting x-ray image
- Self-developed Neural Network Model
- 35 Story Points
- Completed 100% of the Story Points



Product Backlog

Estimation	User Story ID	As a	I want	So that	Feature
3	1	Radiologist	to easily upload x-ray images	doctors and patients have access to the images	Image Upload
3	2	Doctor	to easily upload x-ray images	doctors and patients have access to the images	Image Upload
3	3	Patient	to easily upload x-ray images from my personal machine	doctors have access to the images for review	Image Upload
13	4	Radiologist	to provide quick and automated x-ray results for common chest health issues	more time can be dedicated to analyze uncommon chest health issues	Medexer (AI)
13	5	Doctor	to provide quick and automated x-ray results for common chest health issues	patient response rate and physician workflow improves	Medexer (AI)
8	6	Doctor	to add comments to patient x-ray results	patients are informed early about other information the result does not provide	Doctor Notes
5	7	Patient	to view whether a doctor has reviewed my x-ray results	I can be more confident about the verified results	Reviewed Status

Legend:

Sprint 2

Sprint 3

Sprint 4





MED-X AI



Product Backlog

Estimation	User Story ID	As a	I want	So that	Feature
2	8	Patient	my x-ray results to be explained in simpler terms	I can better understand my diagnosis and health issue	Result Description
1	9	Doctor	to download patient x-ray reports	I can store patient records locally	Download Report
1	10	Patient	to download my x-ray reports	I can store patient records locally	Download Report
5	11	Patient	to have access to all of my x-ray report history	I can track my chest health issues	Report History
5	12	Doctor	to have access to all patient x-ray report histories	I can track patient chest health issues	Report History
2	13	Patient	to quickly view my latest x-ray report	my most recent information is easily accessible	Dashboard
5	14	Patient	to be notified once there is a change to my reports (upload, review, notes, etc.)	I can be informed about any updates as soon as possible	Notification

Legend:

Sprint 2

Sprint 3

Sprint 4





Product Backlog

Estimation	User Story ID	As a	I want	So that	Feature
5	15	Doctor	to be notified once there is a change to patient reports (upload, report, etc.)	I can be informed about any updates as soon as possible	Notification
8	16	Doctor	to browse a specific report and record	I can quickly locate specified information	Search
8	17	Patient	to browse a specific report and record	I can quickly locate specified information	Search
3	18	Radiologist	to register and store my personal info (ID, name, D.O.B.) in my own account	I can access patient information and connect with patients and doctors privately	Profile
3	19	Doctor	to register and store my personal info (ID, name, D.O.B.) in my own account	I can access patient information and connect with patient and radiologists privately	Profile

Legend:

Sprint 2

Sprint 3

Sprint 4





Product Backlog

Estimation	User Story ID	As a	I want	So that	Feature
3	20	Patient	to register and store my personal info (ID, name, D.O.B.) in my own account	I can access my medical information and connect with doctors privately	Profile
3	21	Patient	to login and logout of my own account	my medical information, records and reports are secure	Login/Logout
3	22	Doctor	to login and logout of my own account	Patient medical information, records and reports are secure	Login/Logout
3	23	Patient	to login using my e-mail address	I can access my medical information, records and reports	Login/Logout
3	24	Doctor	to login using my medical professional ID number	I can access patient medical information, records and reports	Login/Logout
1	25	Patient	update my personal information such as my name, address, phone number etc.	the portal has up-to-date information in the event I need to be reached urgently	Profile

Legend:

Sprint 2

Sprint 3

Sprint 4





User Stories

User Story ID	Scenario	Summary	Criteria	Feature
	As a Radiologist I want to easily upload x-ray images so that doctors and patients have access to the images			
1	A radiologist wants to upload an x-ray image	Given I'm a radiologist when I open the Med-X AI web app I should be able to locate an upload button that when clicked on and an image is selected then the application will store the image for processing	Med-X AI App will store the image for processing	Image Upload
	As a Doctor I want to easily upload x-ray images so that doctors and patients have access to the images			
2	A doctor wants to upload an x-ray image	Given I'm a doctor when I open the Med-X AI web app I should be able to locate an upload button that when clicked on and an image is selected then the application will store the image for processing	Med-X AI App will store the image for processing	Image Upload
	As a Patient I want to easily upload x-ray images from my personal machine so that doctors have access to the images for review			
3	A patient wants to upload an x-ray image	Given I'm a patient when I open the Med-X AI web app I should be able to locate an upload button that when clicked on and an image is selected then the application will store the image for processing	Med-X AI App will store the image for processing	Image Upload

Legend:

Sprint 2

Sprint 3

Sprint 4





MED-X AI

User Stories

User Story ID	Scenario	Summary	Criteria	Feature
4	<p>As a Radiologist I want to provide quick and automated x-ray results for common chest health issues so that more time can be dedicated to analyze uncommon chest health issues</p> <p>A radiologist wants to quickly provide an x-ray result</p>	<p>Given I'm a radiologist when I upload an x-ray image then the application will provide a quick diagnosis</p>	Med-X AI App will provide a diagnosis (finding) for the chest health issue	Medexer (AI)
5	<p>As a Doctor I want provide quick and automated x-ray results for common chest health issues so that patient response rate and physician workflow improves</p> <p>A doctor wants to quickly access patient x-ray results</p>	<p>Given I'm a doctor when an x-ray image produces quick results I can then access the result in order to provide patients with a verified response</p>	Med-X AI App will provide a diagnosis (finding) for the chest health issue	Medexer (AI)
6	<p>As a Doctor I want to add comments to patient results so that patients are informed early about other information the result does not provide</p> <p>A doctor wants to write a comment to patient about the x-ray result</p>	<p>Given I'm a doctor when I click on the Doctor's Comments section on a patient's report I can then type and post a message that the patient can see</p>	Med-X AI App will provide a text message section for each report to allow doctors to post	Doctor Notes

Legend:

Sprint 2

Sprint 3

Sprint 4





MED-X AI

User Stories

User Story ID	Scenario	Summary	Criteria	Feature
7	<p>As a Patient I want to view whether a doctor has reviewed my x-ray results so that I can be more confident about the verified results</p> <p>A patient wants to see any additional comments from the doctor</p>	<p>Given I'm a patient when I click on a report in Reports, I can then view a status bar reporting if a doctor has verified the x-ray result</p>	Med-X App will allow patients to view "Under Review" or "Reviewed" status bar in reports	Reviewed Status
8	<p>As a Patient I want my x-ray results to be explained in simpler terms so that I can better understand my diagnosis and health</p> <p>A patient wants to better understand their x-ray result</p>	<p>Given I'm a patient when I click on a report in Reports tab, I can then view a text description of the result in plain language so I can better understand the technical result</p>	Med-X AI App will provide a text description of the finding in the selected report	Result Description
9	<p>As a Doctor I want to download patient x-ray reports so that I can store patient records locally</p> <p>A Doctor wants to store patient records locally</p>	<p>Given I'm a doctor when I open a patient's report and click a download button the selected record is then downloaded and saved to my local computer</p>	Med-X AI App will transfer the report file from the remote system to the user's local system	Download Report

Legend:

Sprint 2

Sprint 3

Sprint 4





MED-X AI

User Stories

User Story ID	Scenario	Summary	Criteria	Feature
	As a Patient I want to download my x-ray reports so that I can store my records locally			
10	A patient wants to store medical records locally	Given I'm a patient when I open my report and click a download button the selected report is then downloaded and saved to my local computer	Med-X AI App will transfer the report file from the remote system to the user's local system	Download Report
	As a Patient I want to have access to my x-ray report history so that I can track my chest health issues			
11	A patient wants to keep track of all of their x-ray reports	Given I'm a patient when I click on the Reports tab then I should see a gallery of reports that have been generated	Med-X AI App will store all the reports in the cloud	Report History
	As a Doctor I want to have access to patient x-ray report histories so that I can track patient chest health issues			
12	A doctor wants to keep track of their patients reports	Given I'm a doctor when I click on the Reports tab of a specific patient then I should see a gallery of reports that has been generated for that patient	Med-X AI App will store all the reports in the cloud	Report History

Legend:

Sprint 2

Sprint 3

Sprint 4





MED-X AI

User Stories

User Story ID	Scenario	Summary	Criteria	Feature
13	<p>As a Patient I want to quickly view my latest x-ray report so that my most recent information is easily accessible</p>			
	A patient wants to view their latest x-ray report	Given I'm a patient when I log into the account then the Dashboard page will be displayed with the most recent x-ray results	Med-X AI App will open to the Dashboard upon sign in	Dashboard
14	<p>As a Patient I want to be notified once there is a change to my reports (upload, review, notes, etc.) so that I can be informed about any updates as soon as possible</p>			
	A patients wants to be informed of any changes to their reports	Given I'm a patient when a change is made to my report then I should receive a notification	Med-X AI App will alert the user of a change made to their report	Notification
15	<p>As a Doctor I want to be notified once there is a change to patient reports (upload, report, etc.) so that I can be informed about any updates as soon as possible</p>			
	A doctor wants to be informed of any changes to patient reports	Given I'm a doctor when a change is made to a patient report then I should receive a notification	Med-X AI App will alert the user of a change made to their report	Notification

Legend:

Sprint 2

Sprint 3

Sprint 4





MED-X AI

User Stories

User Story ID	Scenario	Summary	Criteria	Feature
	As a Doctor I want to browse all reports and records so that I can quickly locate specified information			
16	A doctor wants to locate a specific report/record	Given I'm a doctor when I search for a report in the search bar then I should be able to quickly locate it	Med-X AI App will store reports using an x-ray id and patient name	Search
	As a Patient I want to browse my reports and records so that I can quickly locate specified information			
17	A patient wants to locate a specific report/record	Given I'm a patient when I search for a report in the search bar then I should be able to quickly locate it	Med-X AI App will store reports using an x-ray id	Search
	As a Radiologist I want to register and store my personal info (ID, name, DOB) in my own account so that I can access patient information and connect to patients and doctors privately			
18	A radiologist wants to create their own account to securely access patient information	Given I'm a radiologist when I use the app, I should be able to have my own account then patient information will be secured, and communication will be private	Med-X AI App will store user credentials (medx ID)	Profile

Legend:

Sprint 2

Sprint 3

Sprint 4





MED-X AI

User Stories

User Story ID	Scenario	Summary	Criteria	Feature
	As a Doctor I want to register and store my personal info (ID, name, DOB) in my own account so that I can access patient information and connect to patients and radiologists privately			
19	A doctor wants to create their own account to securely access patient information	Given I'm a doctor when I use the app, I should be able to have my own account then patient information will be secured, and communication will be private	Med-X AI App will store user credentials (medx ID)	Profile
	As a Patient I want to register and store my personal info (ID, name, DOB) in my own account so that I can access my medical information and connect to doctors privately			
20	A patient wants to create their own account to securely access their information	Given I'm a patient when I use the app, I should be able to have my own account then my information will be secured, and communication will be private	Med-X AI App will store email and password	Profile

Legend:

Sprint 2

Sprint 3

Sprint 4





MED-X AI

User Stories

User Story ID	Scenario	Summary	Criteria	Feature
	As a Patient I want to login and logout of my own account so that my medical information, records and reports are secure			
21	A patient wants to securely and privately start and end sessions on their account	Given I'm a patient when I open the app, I then am prompted to log in to my account with my credentials and click a logout button to end my session	Med-X AI App will begin with a login page and have a button to logout of the current account	Login/Logout
	As a Doctor I want to login and logout of my own account so that patient medical information, records and reports are secure			
22	A doctor wants to securely and privately start and end sessions on their account	Given I'm a doctor when I open the app, I then am prompted to log in to my account with my credentials and click a logout button to end my session	Med-X AI App will begin with a login page and have a button to logout of the current account	Login/Logout

**Legend:**

Sprint 2

Sprint 3

Sprint 4



User Stories

User Story ID	Scenario	Summary	Criteria	Feature
	As a Patient I want to login using my e-mail address so that I can access my medical information, records and reports			
23	A patient wants to access their medical records by using their personal e-mail address	Given I'm a patient when I am prompted to login, I can then enter my personal e-mail address to access the records related to my account	Med-X AI App will create and store patient accounts through e-mail (username)	Login/Logout
	As a Doctor I want to login using my medical professional ID number so that I can access patient medical information, records and reports			
24	A doctor wants to access patient medical records by using their ID number	Given I'm a doctor when I am prompted to login, I can then enter my personal medx ID number to access the records related to my account	Med-X AI App will create and store doctor accounts through their ID number (username)	Login/Logout

Legend:

Sprint 2

Sprint 3

Sprint 4





MED-X AI

User Stories

User Story ID	Scenario	Summary	Criteria	Feature
	<p>As a Patient I want to update my personal information such as my name, address, phone number, etc. so that the portal has up-to-date information in the event I need to be reached urgently</p>			
25	A patient wants to update personal profile information when they change	Given I'm a patient when I click my profile and the edit button, I can then change the inputted profile information (name, address, phone number, etc.) and click save	Med-X AI App will allow patients to update profile information and store the changes in the database	Profile

Legend:

Sprint 2

Sprint 3

Sprint 4





Sprint 3 Backlog:

Estimation	User Story ID	As a	I want	So that	Feature
8	6	Doctor	to add comments to patient x-ray results	patients are informed early about other information the result does not provide	Doctor Notes
5	7	Patient	to view whether a doctor has reviewed my x-ray results	I can be more confident about the verified results	Reviewed Status
1	9	Doctor	to download patient x-ray reports	I can store patient records locally	Download Report
1	10	Patient	to download my x-ray reports	I can store patient records locally	Download Report
2	13	Patient	to quickly view my latest x-ray report	my most recent information is easily accessible	Dashboard
8	16	Doctor	to browse a specific report and record	I can quickly locate specified information	Search
8	17	Patient	to browse a specific report and record	I can quickly locate specified information	Search

Sprint 3 Story Points: 33





Test Cases

Test ID	User Story ID	Feature to Test	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Pass/Fail	Comments
7	16&17	Search	Search by Report ID	Dashboard --> Click on Search Bar --> Type Exact Report ID	ID number - 00006	Report ID is displayed	00006	Pass	
8	16&17	Search	Search by Report ID	Dashboard --> Click on Search Bar --> Type Partial Report ID	ID number - 0	Report ID's containing the numbers are displayed as a list	00000, 00001, 00002, 00003, 00004, 00005, 00006	Pass	
9	16&17	Search	Search by invalid Report ID	Dashboard --> Click on Search Bar --> Type Invalid Report ID	ID number - 10111	No Report ID is displayed	No Report ID is displayed	Pass	
10	16&17	Search	Search by Reviewed Status	Dashboard --> Click Search Bar --> Type Reviewed	X-ray Document	A list of Report ID's that are Reviewed	00000, 00001	Pass	





Test Cases

Test ID	User Story ID	Feature to Test	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Pass/Fail	Comments
11	16&17	Search	Search by Reviewed Status	Dashboard --> Click Search Bar --> Type Reviewing	X-ray Document	A list of Report ID's that are under Review	00002, 00003, 00004, 00005, 00006	Pass	
12	16&17	Search	Search by Date	Dashboard --> Click on Search Bar --> Type Date	Date – 3/29/2024	All Report ID's with the specified date are displayed	1 report - 00002, Lung Opacity, Reviewing, 3/29/2024	Pass	
13	13	Dashboard	Dashboard for doctor	Click on Doctor --> Dashboard	X-ray Document	Dashboard for specified user is displayed	Dashboard for doctor	Pass	
14	13	Dashboard	Dashboard for patient	Click on Patient --> Dashboard	X-ray Document	Dashboard for specified user is displayed	Dashboard for patient	Pass	





MED-X AI



Test Cases

Test ID	User Story ID	Feature to Test	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Pass/Fail	Comments
15	9&10	Download Report	Download existing pdf report	Dashboard --> Medexer tab --> Click Browse Button --> Select a PNG/JPG image --> Click Submit --> Click Print Report	X-ray Document	Download report pdf	Report is Downloaded to selected File Location	Pass	
16	9&10	Download Report	Printing existing pdf report	Dashboard --> Medexer tab --> Click Browse Button --> Select a PNG/JPG image --> Click Submit --> Click Print Report	X-ray Document	Prints report pdf	Printer prints the report	Pass	
17	6	Doctors Notes	Comment Added	Dashboard --> Report tab --> Click on the Comment Box	String comment	Adds comment to report	Doctor's note is added to report	Pass	





Test Cases

Test ID	User Story ID	Feature to Test	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Pass/Fail	Comments
18	6	Doctors Notes	Status Bar Reflecting Status Change	Dashboard --> Click on Report tab --> Select X-ray Report --> Update the Report by typing a comment --> Click on Update Report Button	String Comment	Status changes from "Reviewing" to Reviewed	Status changes from Reviewing to Reviewed	Fail	Can click on Update Report Button without a comment and still change the status to Reviewed
19	7	Reviewed Status	Update Report	Dashboard --> Click on Report tab --> Select X-ray Report --> Check Report Status	X-ray Document	The status of the report is reviewed if a doctor has reviewed it otherwise it will say reviewing	Reviewing	Pass	

Pass/ Fail Ratio: 12/13 = 92%





Sprint 3 Story Completion

Estimation	User Story ID	As a	I want	So that	Feature	Status
8	6	Doctor	to add comments to patient x-ray results	patients are informed early about other information the result does not provide	Doctor Notes	Completed
5	7	Patient	to view whether a doctor has reviewed my x-ray results	I can be more confident about the verified results	Reviewed Status	Completed
1	9	Doctor	to download patient x-ray reports	I can store patient records locally	Download Report	Completed
1	10	Patient	to download my x-ray reports	I can store patient records locally	Download Report	Completed
2	13	Patient	to quickly view my latest x-ray report	my most recent information is easily accessible	Dashboard	Completed
8	16	Doctor	to browse a specific report and record	I can quickly locate specified information	Search	Completed
8	17	Patient	to browse a specific report and record	I can quickly locate specified information	Search	Completed

Sprint 3 Story Points: 33

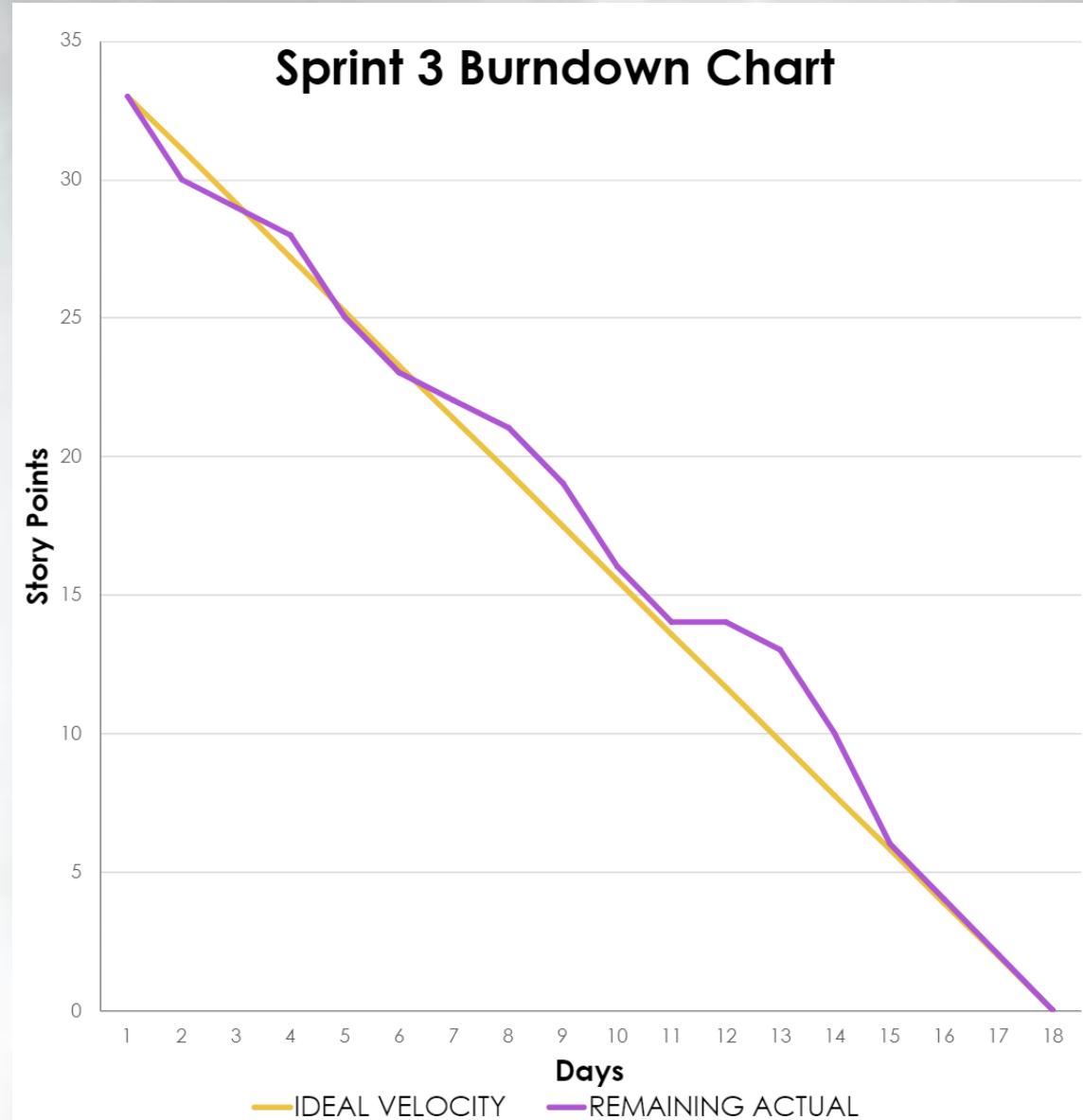
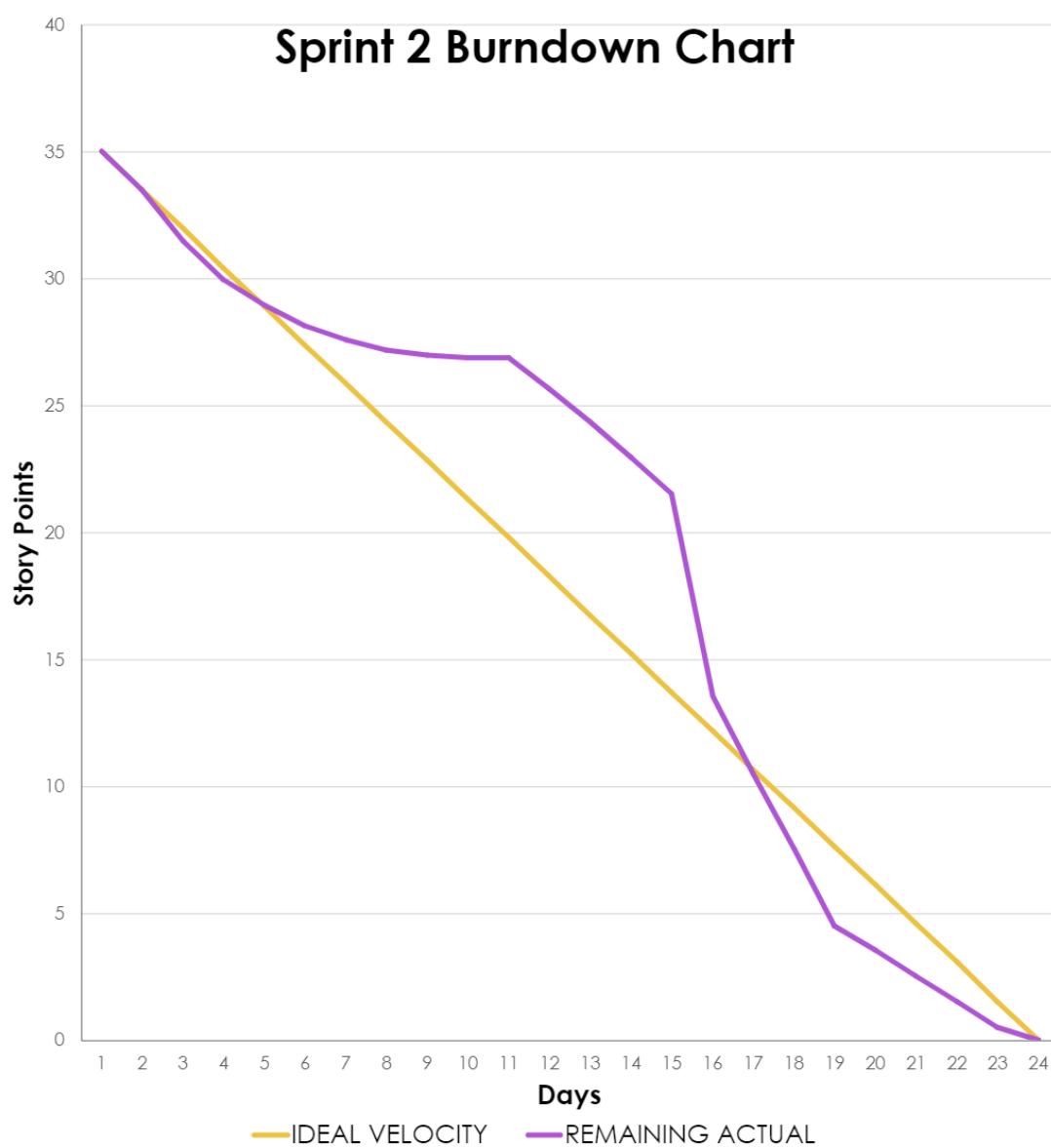




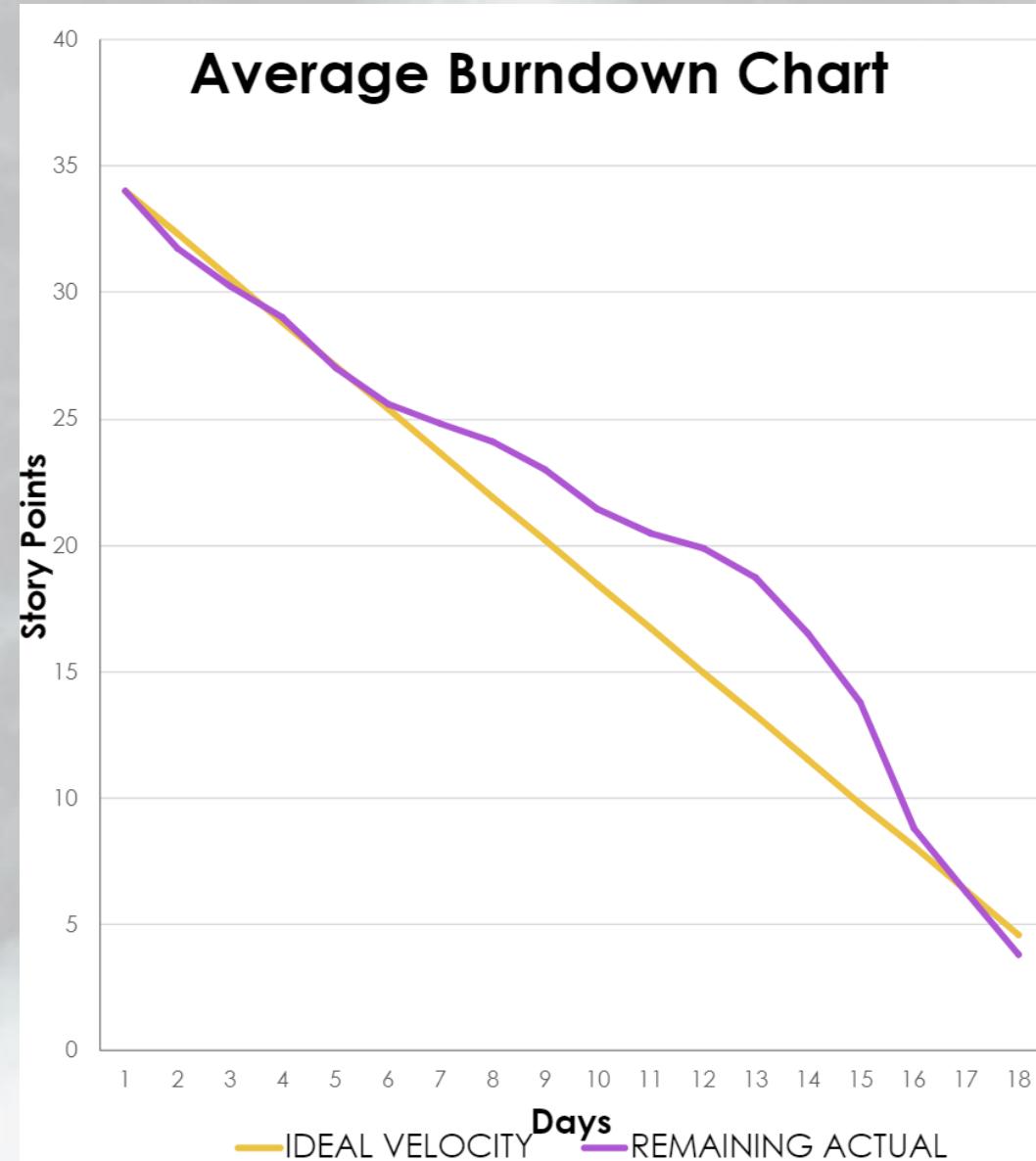
Team Velocity

33 story
points

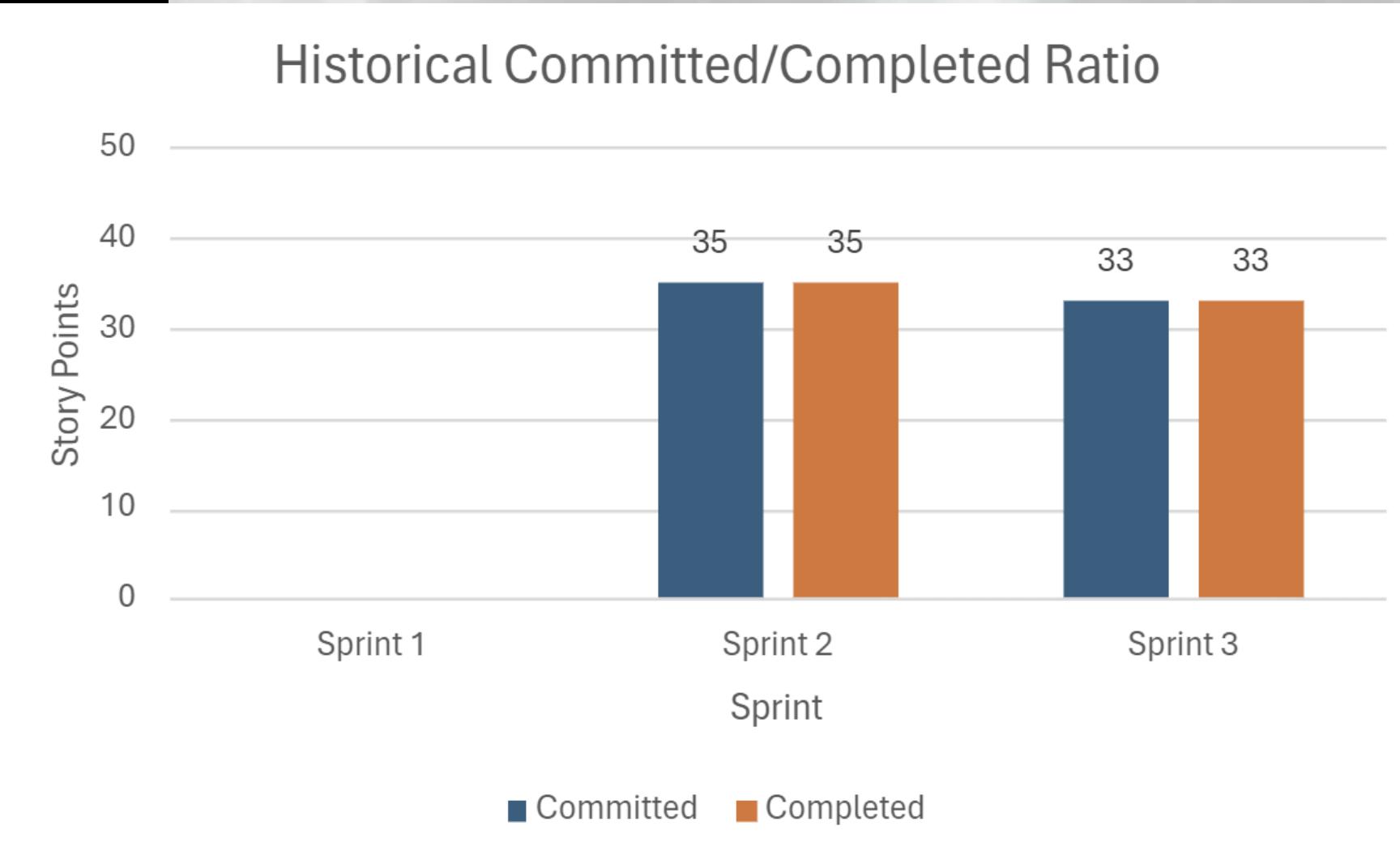
Burndown Chart



Burndown Chart



Completed / Committed Ratio



Sprint 3 Story Points: 33

Avg
34 pts
100%

Retrospective:

Retrospective 3

What went well +

Team morale was always good. Never felt like we had interpersonal conflict	Our flexibility to move our schedules around in order to prioritize the project
+ 7	+ 5
All members prioritize the project and have a clear goal	Good team communication for resolving issues
+ 4	+ 3
I liked how the front-end team worked together on the CRUD/firebase API on short notice, carrying the project to completion	The Sprint agenda was clear and organized in a more structured way
+ 3	+ 3
Constant communication and updates on WhatsApp	Team coordination and supporting each other.
+ 2	+ 2
Members share new skills and help teach each other	We have a solid idea of what is needed to be completed for Sprint 4
+ 2	+ 2
Team enthusiasm was phenomenal throughout all sprints	Members choose tasks based on their skills and encourage learning new ones
+ 2	+ 2
The story points for sprint 3 were all completed	More vocal about asking for help when needed
+ 1	+ 1

What needs to be Improved +

Plan out work time accordingly so it doesn't need to impact sleep or take up too much personal time	keeping up with ideal story point achievements to improve the burndown chart representing our team efficiency
+ 9	+ 5
Create limited branches on the repo and do clean up as well	understanding of everyone's downtime & uptime
+ 4	+ 4
If possible, try to avoid leaving unclear tasks	A much better DevOps planning for faster development like automation and CI/CD.
+ 2	+ 2
improve codebase collaboration	Better document updates to tasks (on Jira)
+ 2	+ 2
our overachiever mentality	Set breaktime in between meetings
+ 2	+ 1
Do more dry runs for the videos that need to be recorded for that current sprint	Balancing our physical, mental, and emotional state
+ 1	+ 1
Send alerts for when a minitask is due	Still working on overlapping when speaking
+ 0	+ 0

Action Items +

Evenly divide the tasks to be completed daily	After 2 or 3 tasks are completed come together as a team and showcase what's been worked on
+ 0	+ 0

+ 0

On day of collaboration assist one another with troubleshooting



Retrospective:

What Went Well

- Team morale was good; no interpersonal conflict
- Flexibility to move our schedules around to prioritize the project
- Good team communication for resolving issues
- Sprint Agenda was clear, organized, and structured

What needs to be Improved

- Plan out work time so it doesn't impact sleep or personal life
- Keeping up with story points to improve burndown chart
- Create limited branches on the repository and maintain it

Action Items

- Evenly distribute the tasks to be completed daily
- After 2 or 3 tasks are completed come together as a team and showcase what's been worked on
- On day of collaboration assist one another with troubleshooting



Sprint 4 Workload:

Estimation	User Story ID	As a	I want	So that	Feature
2	8	Patient	my x-ray results to be explained in simpler terms	I can better understand my diagnosis and health issue	Result Description
5	11	Patient	to have access to all of my x-ray report history	I can track my chest health issues	Report History
5	12	Doctor	to have access to all patient x-ray report histories	I can track patient chest health issues	Report History
5	14	Patient	to be notified once there is a change to my reports (upload, review, notes, etc.)	I can be informed about any updates as soon as possible	Notification
5	15	Doctor	to be notified once there is a change to patient reports (upload, report, etc.)	I can be informed about any updates as soon as possible	Notification

Sprint 4 Story Points: 44





Sprint 4 Workload:

Estimation	User Story ID	As a	I want	So that	Feature
3	18	Radiologist	to register and store my personal info (ID, name, D.O.B.) in my own account	I can access patient information and connect with patients and doctors privately	Profile
3	19	Doctor	to register and store my personal info (ID, name, D.O.B.) in my own account	I can access patient information and connect with patient and radiologists privately	Profile
3	20	Patient	to register and store my personal info (ID, name, D.O.B.) in my own account	I can access my medical information and connect with doctors privately	Profile
3	21	Patient	to login and logout of my own account	my medical information, records and reports are secure	Login/Logout
3	22	Doctor	to login and logout of my own account	Patient medical information, records and reports are secure	Login/Logout

Sprint 4 Story Points: 44





Sprint 4 Workload:

Estimation	User Story ID	As a	I want	So that	Feature
3	23	Patient	to login using my e-mail address	I can access my medical information, records and reports	Login/Logout
3	24	Doctor	to login using my medical professional ID number	I can access patient medical information, records and reports	Login/Logout
1	25	Patient	update my personal information such as my name, address, phone number etc.	the portal has up-to-date information in the event I need to be reached urgently	Profile

Sprint 4 Story Points: 44





MED-X AI

Code Snippet:

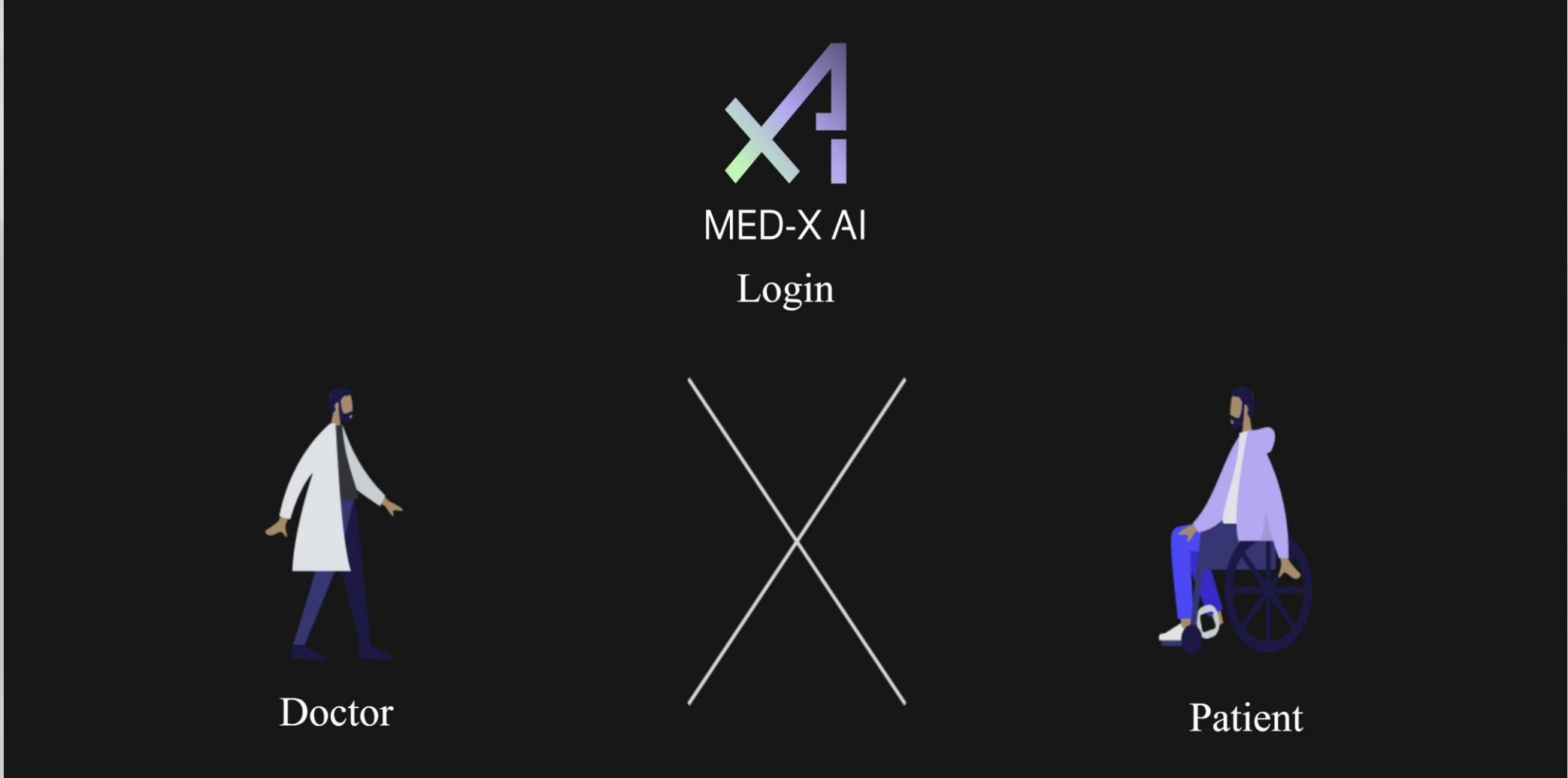
```
JS medexer.js ×

2024S-Med-X > Project > my-react-app > src > pages > JS medexer.js > [o] Medexer > [o] handlePredict

10  const Medexer = () => {
11    const uploadImage = () => {
12      .catch(error => {
13        ...
14      });
15    };
16
17
18    const handlePredict = async ( imageURL ) => {
19      try {
20        const response = await fetch(`http://localhost:5001/predict?image_url=${encodeURIComponent(imageURL)}`);
21
22        if (!response.ok) {
23          throw new Error('Failed to fetch');
24        }
25
26        const data = await response.json();
27
28        console.log('Prediction:', data.prediction.name);
29        console.log('Description:', data.prediction.description);
30
31        setFinding(data.prediction.name);
32        setDescription(data.prediction.description); // Set description in state
33        history("/report", { state: { result: data.prediction.name, img: imageURL, description: data.prediction.description } });
34      } catch (error) {
35        setIsLoading(false); // Set loading to false in case of error
36        console.error('Error occurred while fetching data:', error);
37      }
38    };
39
40
41    return (
42      ...
43    );
44
45
46    ...
47  );
48
49
50  return (
51    ...
52  );
53
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55  ...
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113 ...
PreetRai, 2 weeks ago • fixed minor bug in loading and cleaned the proj...
```



Application Screenshots:





Application Screenshots:

Search your report id, medical term, date or status

Dashboard

Report #00012 4/8/2024, 8:32:46 PM

Lung Opacity

Doctors Message:
the report is yet to be reviewed

Reviewing

copyright Med-X AI

Search your report id, medical term, date or status

Dashboard

Report #00012 4/8/2024, 8:32:46 PM

Lung Opacity

Doctors Message:
the report is yet to be reviewed

Reviewing

Angela Fernandez
212-689-3925

Logout

copyright Med-X AI



Application Screenshots:

This screenshot shows the MED-X AI application's file upload interface. At the top, there is a search bar with the placeholder text "Search your report id, medical term, date or status". To the right of the search bar are three small circular icons: a magnifying glass, a bell, and a user profile picture. Below the search bar is the MED-X AI logo and the text "MED-X AI". On the left side, there is a vertical sidebar with three menu items: "Dashboard", "Medexer", and "Report". The main area features a large, semi-transparent cloud icon with an upward arrow, indicating where to drag and drop files. Below this icon is the text "Drag & Drop to Upload Chest X-ray". Underneath the cloud icon is a "Browse" button. At the bottom of the main area, the text "Supported File formats: .png, .jpeg" is displayed. The footer of the screen contains the copyright notice "copyright Med-X AI".

This screenshot shows the same MED-X AI application interface as the first one, but with an error message displayed. The error message is a red box containing the text "Unsupported file format. Please upload a .png or jpeg file. Close". The rest of the interface elements are identical to the first screenshot, including the search bar, sidebar, file upload area, and footer.



Application Screenshots:

Search your report id, medical term, date or status

MED-X AI

Dashboard

Medexer

Report



Press Submit and Wait...!

00001322_001.png
0.39 MB

Re-upload Submit

copyright Med-X AI

This screenshot shows the submission interface for a medical image. A chest X-ray image is displayed, with the file name '00001322_001.png' and size '0.39 MB' below it. Two buttons, 'Re-upload' and 'Submit', are at the bottom. The interface includes a search bar at the top and a navigation sidebar on the left.

Search your report id, medical term, date or status

MED-X AI

Dashboard

Medexer

Report

Report



Results 4/8/2024, 8:54:52 PM

Lung Lesion

Submit Report

copyright Med-X AI

This screenshot shows the report results page. It displays the same X-ray image and includes the timestamp '4/8/2024, 8:54:52 PM'. A green button labeled 'Submit Report' is visible. The interface includes a search bar at the top and a navigation sidebar on the left.



Application Screenshots:

Search your report id, medical term, date or status

Report

MED-X AI

Dashboard

Medexer

Report



Report is Submitted

Report ID: 00007

13 PM

Reviewing

OK

copyright Med-X AI

This screenshot shows the "Report" screen of the MED-X AI application. It features a dark theme with a search bar at the top. On the left, there's a sidebar with navigation links for "Dashboard", "Medexer", and "Report". The main area displays a lung X-ray image. A central modal window titled "Report is Submitted" contains the text "Report ID: 00007" and the time "13 PM". Below this, there are two buttons: a yellow "Reviewing" button and a white "OK" button. At the bottom of the screen, the copyright notice "copyright Med-X AI" is visible.

Search your report id, medical term, date or status

MED-X AI

Dashboard

Medexer

Report



Report #00007

4/8/2024, 8:54:52 PM

Lung Lesion

Doctors Message:

the report is yet to be reviewed

Reviewing

copyright Med-X AI

This screenshot shows the "Dashboard" screen of the MED-X AI application. It has a dark theme with a search bar at the top. The sidebar on the left includes "Dashboard", "Medexer", and "Report". The main content area shows a lung X-ray image. A summary card for "Report #00007" from "4/8/2024, 8:54:52 PM" is displayed, indicating a "Lung Lesion". The "Doctors Message" field contains the text "the report is yet to be reviewed". A yellow "Reviewing" button is present. The copyright notice "copyright Med-X AI" is at the bottom.



Application Screenshots:

00

00000 No Finding
Reviewed 4/2/2024

00001 No Finding
Reviewed 4/3/2024

00002 Lung Opacity
Reviewing 3/29/2024

00003 Lung Opacity
Reviewing 4/3/2024

00005 No Finding
Reviewed 4/3/2024

00006 Atelectasis
Reviewing 4/4/2024

00007 Lung Lesion
Reviewing 4/8/2024

00

MED-X AI

Dashboard

Medexer

Report

Report ID: #00007

4/8/2024, 8:54:52 PM

Lung Lesion

Report status: Reviewing

Doctor's Message:

Print Report

copyright Med-X AI

00

00

MED-X AI

Dashboard

Medexer

Report

Report ID: #00007

4/8/2024, 8:54:52 PM

Lung Lesion

Report status: Reviewing

Doctor's Message:

Print Report

copyright Med-X AI



Application Screenshots:

 MED-X AI

ID: 00007
Name : Angela Fernandez

Report 4/8/2024, 8:54:52 PM

Lung Lesion

Horem ipsum dolor sit amet, consectetur adipiscing elit. Etiam eu turpis molestie, dictum est a, mattis tellus. Sed dignissim, metus nec fringilla accumsan, risus sem sollicitudin lacus, ut interdum tellus elit sed risus. Maecenas eget condimentum velit

Status:Reviewing

Hospital Name hospital@gmail.com
999-1232-31232

Doctors Comment:

Copyright @ medxai



MED-X AI

Firebase API:

The image shows a code editor interface with two tabs open, both titled "medexer.js".

Top Tab (Line Numbers 3-18):

```
3 import storage from "../firebase.js";
4 import { ref, getDownloadURL, uploadBytes } from "firebase/storage";
5 import { v4 } from "uuid";
6 import { useNavigate } from "react-router-dom";
7 import Loading from './loading.js';
8
9
10 const Medexer = () => {
11   const [fileData, setFileData] = useState({ previewFile: null, errorMessage: '' });
12   const fileInputRef = useRef(null);
13   const [isDraggingOver, setIsDraggingOver] = useState(false);
14   const [uploadedImage, setUploadedImage] = useState(null)
15
16   const [finding, setFinding] = useState('');
17   const [isLoading, setIsLoading] = useState(false); //state for loading status
18 }
```

Bottom Tab (Line Numbers 10-82):

```
10 const Medexer = () => {
11
12   const uploadImage = () => { //upload function that talks to storage service
13     if (uploadedImage == null) return; //if nothing has been uploaded, continue
14     setIsLoading(true); //setting loading to true before uploaded image
15     const imageRef = ref(storage, `images/${uploadedImage.name + v4()}`);
16     uploadBytes(imageRef, uploadedImage).then((snapshot) => { //translate image into bytes and send alert
17       getDownloadURL(snapshot.ref).then((url) => {
18         handlePredict(url)
19       })
20       alert("image uploaded");
21       setIsLoading(false); //set loading to false after uploaded image
22     });
23   };
24 }
```



MED-X AI

Flask/Cors:

```
server.py  X  
flask-server > server.py  
12     from flask import Flask, request, jsonify  
13     import requests  
14     from flask_cors import CORS  
15     from tensorflow.keras.models import load_model  
16     from predictions import get_finding  
17  
18     # Load the model  
19     model = load_model('dicom_images.keras')  
20  
21     app = Flask(__name__)  
22     CORS(app)  
23  
24     @app.route('/predict', methods=['GET', 'OPTIONS'])  
25  
26     def predict():  
27         try:  
28             # Get image URL from request arguments  
29             image_url = request.args.get('image_url')  
30  
31             # Download image  
32             print("Image URL:", image_url)  
33             response = requests.get(image_url, stream=True)
```

```
const handlePredict = async (imageURL) => {  
  
    try {  
        const response = await fetch(`http://localhost:5001/predict?image_url=${encodeURIComponent(imageURL)}`);  
  
        if (!response.ok) {  
            throw new Error('Failed to fetch');  
        }  
  
        const data = await response.json();  
  
        setFinding(data.prediction);  
        history("/report", { state: { result: data.prediction, img: imageURL } });  
        // setError('');  
    } catch (error) {  
        // setError('Error occurred while fetching data');  
        console.error(error);  
    }  
};
```



Docker for CI/CD:

SPRINT 2

quizzical_perlman

myflaskapp

7b6ac82374be

5001:5000

Logs Inspect Bind mounts Exec Files Stats

```
1/1 [=====] - 0s 41ms/step
2024-03-12 15:43:05 172.17.0.1 - - [12/Mar/2024 19:43:05] "GET /predict?image_url=https://2_002.pngca4211bf-4875-476e-a564-0a0364e44b01?alt%3Dmedia%26token%3Dec130f69-596c-4c70-af7
2024-03-12 15:43:14 Image URL: https://firebasestorage.googleapis.com/v0/b/med-x-5f2b4.appspotToken=281e9d4b-01b9-4dd9-a8bf-23df65ed693f
2024-03-12 15:43:14 Image downloaded successfully!
1/1 [=====] - 0s 53ms/step
2024-03-12 15:43:14 172.17.0.1 - - [12/Mar/2024 19:43:14] "GET /predict?image_url=https://2_003.pngf315a6a-adce-4e37-a130-2fc9a7ff356?alt%3Dmedia%26token%3D281e9d4b-01b9-4dd9-a8t
2024-03-12 15:43:23 Image URL: https://firebasestorage.googleapis.com/v0/b/med-x-5f2b4.appspotToken=079db464-f343-40c2-a5fb-3c6763daec2d
2024-03-12 15:43:23 Image downloaded successfully!
1/1 [=====] - 0s 125ms/step
2024-03-12 15:43:23 172.17.0.1 - - [12/Mar/2024 19:43:23] "GET /predict?image_url=https://2_004.pngff109c6b-bc30-40e7-bc41-e21dfe125c31?alt%3Dmedia%26token%3D079db464-f343-40c2-a51
2024-03-12 15:43:34 Image URL: https://firebasestorage.googleapis.com/v0/b/med-x-5f2b4.appspotToken=d7377887-e7af-4721-9031-28defefab6956
2024-03-12 15:43:34 Image downloaded successfully!
1/1 [=====] - 0s 51ms/step
2024-03-12 15:43:34 172.17.0.1 - - [12/Mar/2024 19:43:34] "GET /predict?image_url=https://3_000.pngfa990c97-158c-4dad-97ba-0248bd0ac038?alt%3Dmedia%26token%3Dd7377887-e7af-4721-903
2024-03-12 15:43:42 Image URL: https://firebasestorage.googleapis.com/v0/b/med-x-5f2b4.appspotToken=a26551bf-9ec9-4040-9436-f474b86982ba
2024-03-12 15:43:42 Image downloaded successfully!
1/1 [=====] - 0s 45ms/step
2024-03-12 15:43:42 172.17.0.1 - - [12/Mar/2024 19:43:42] "GET /predict?image_url=https://3_001.png0e2b00f9-eb58-43ea-a8ca-730792fc650a?alt%3Dmedia%26token%3Da26551bf-9ec9-4040-943
2024-03-12 15:43:54 Image URL: https://firebasestorage.googleapis.com/v0/b/med-x-5f2b4.appspotToken=28e84946-9ded-4c75-a8e7-754a0285c5ae
2024-03-12 15:43:54 Image downloaded successfully!
1/1 [=====] - 0s 41ms/step
```

SPRINT 3

wizardly_darwin

flask-app

6223a9eda912

5001:5000

Logs Inspect Bind mounts Exec Files Stats

```
fa1291-e287-4890-8d8b-8cb41130344a?alt=media&token=6b33d5e8-0653-4782-91e5-
2024-04-08 19:27:13 Image downloaded successfully!
1/1 [=====] - 0s 178ms/step
2024-04-08 19:27:13 172.17.0.1 - - [08/Apr/2024 23:27:13] "GET /predict?image_url=https://med-x-5f2b4.appspot.com/o/images%252F00001323_000.png
2024-04-08 19:27:36 Image URL: https://firebasestorage.googleapis.com/v0/b/cee0a6-ae7a-461e-8e3a-178e5fa53f10?alt=media&token=dcb90437-fc23-4715-b337-
2024-04-08 19:27:36 Image downloaded successfully!
1/1 [=====] - 0s 135ms/step
2024-04-08 19:27:36 172.17.0.1 - - [08/Apr/2024 23:27:36] "GET /predict?image_url=https://med-x-5f2b4.appspot.com/o/images%252F00001323_000.png
50ce0a6-ae7a-461e-8e3a-b337-1a1c4ca4b2fa HTTP/1.1" 200 -
2024-04-08 19:28:00 Image URL: https://firebasestorage.googleapis.com/v0/b/06504a-3440-41e6-a9e4-396361841849?alt=media&token=c7f575d4-f174-4b60-9b53-
2024-04-08 19:28:00 Image downloaded successfully!
1/1 [=====] - 0s 159ms/step
2024-04-08 19:28:00 172.17.0.1 - - [08/Apr/2024 23:28:00] "GET /predict?image_url=https://med-x-5f2b4.appspot.com/o/images%252F00001322_004.png
f906504a-3440-41e6-a9e4-9b53-b9c90b4001b9 HTTP/1.1" 200 -
2024-04-08 19:28:28 Image URL: https://firebasestorage.googleapis.com/v0/b/773ea0-51c5-4e85-8aaaf-1bd5afd9827c?alt=media&token=f71a0068-c6fd-4422-9806-
2024-04-08 19:28:28 Image downloaded successfully!
1/1 [=====] - 0s 176ms/step
2024-04-08 19:28:28 172.17.0.1 - - [08/Apr/2024 23:28:28] "GET /predict?image_url=https://med-x-5f2b4.appspot.com/o/images%252F00001322_000.png
78773ea0-51c5-4e85-8aaaf-9806-856ed4ef9cc7 HTTP/1.1" 200 -
```



Docker:

Containers

[Give feedback](#)

Container CPU usage ⓘ
0.37% / 1600% (16 CPUs available)

Container memory usage ⓘ
1.43GB / 7.44GB

Show charts

Search

☰Only show running containers

<input type="checkbox"/>	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
<input type="checkbox"/>	 serene_jone 10db8bc84cc	react-app	Running	0.08%	3000:3000	1 second ago	... ⋮ trash
<input type="checkbox"/>	 focused_bra df7af3266e29	flask-app	Running	0.29%	5001:5000	1 second ago	... ⋮ trash



Live Application Demo:





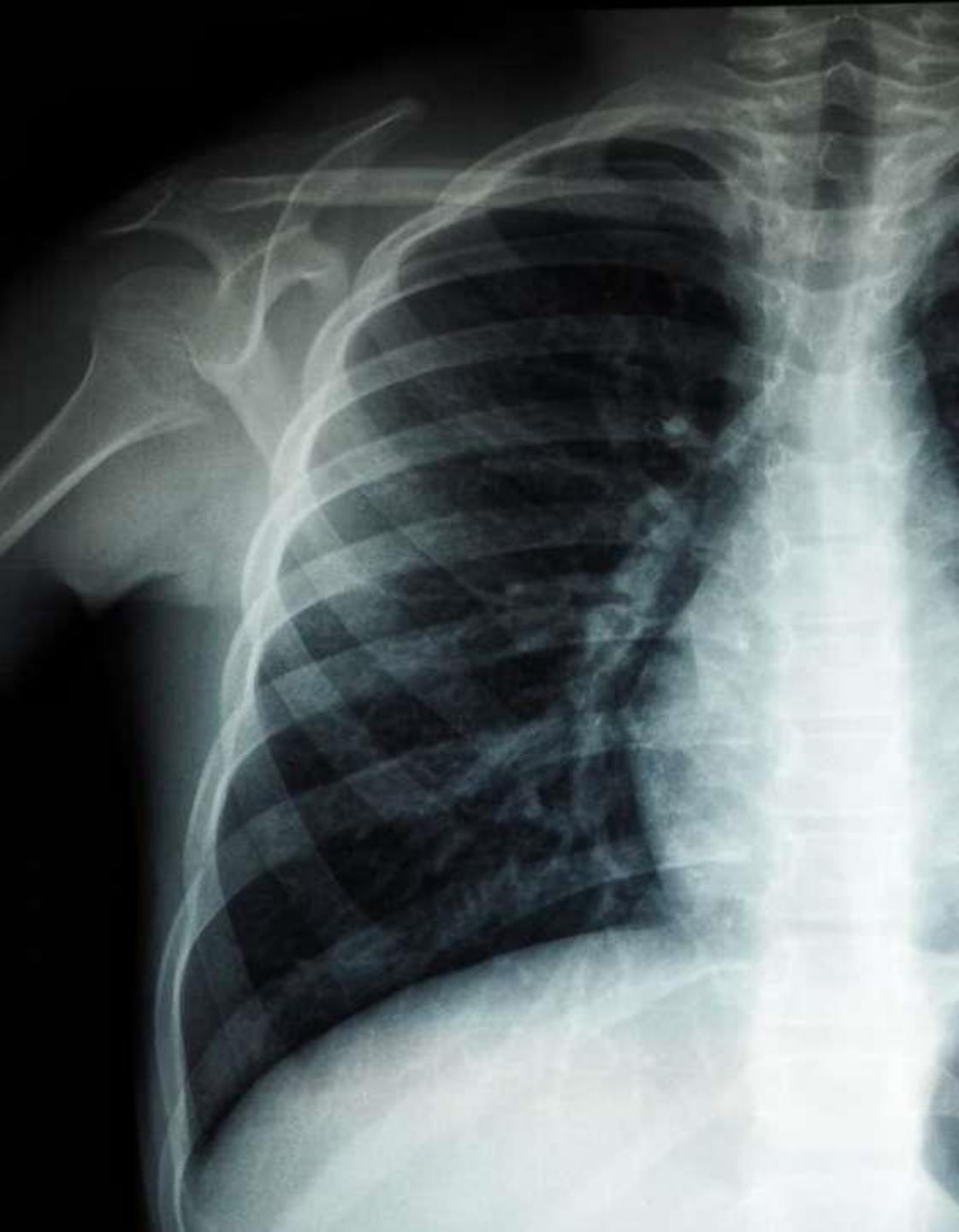
Next Steps:

- Notify the user when the status of the report is updated
- Create multiple user sessions
- Provide a friendly definition of the medical term
- Create a registration page



Wikipage Link

<https://github.com/htmw/2024S-Med-X/wiki>



Thank
You
For
Listening