

# FIT3164 Data Science Project Part 2

Team Management Report

Automated Health Information System

## Team MDS2

Foo Kai Yan | 33085625 | kfoo0012@student.monash.edu
Alicia Quek Chik Wen | 33045240 | aque0004@student.monash.edu
Eunice Lee Wen Jing | 33250979 | elee0075@student.monash.edu
Jesse Yow San Gene | 32794649 | jyow0001@student.monash.edu

Supervised by:

Dr Muhammad Fermi Pasha

Word Count:

Date: 17th October 2024

# **Table of Contents**

1. Introduction	3
2. Team Management Discussion	3
2.1. Successes and Key Achievements	3
2.2. Opportunities Created	3
2.3. Challenges Faced	3
2.4. Actionable Adjustments for Future Projects	4
3. Project Evaluation	4
4. Individual Contributions Evaluation	4
4.1. Member 1: Foo Kai Yan	4
4.2. Member 2: Alicia Quek Chik Wen	5
4.3. Member 3: Eunice Lee Wen Jing	5
4.4. Member 4: Jesse Yow San Gene	5
5. Project Task Allocation and Contribution	5
6. Team Dynamics and Issue Resolution	6
7. Meeting Minutes	7
Meeting Minutes 1	7
Meeting Minutes 2	8
Meeting Minutes 3	9
Meeting Minutes 4	
Meeting Minutes 5	11
Meeting Minutes 6	
Meeting Minutes 7	14
Meeting Minutes 8	
Meeting Minutes 9	
Meeting Minutes 10	
Meeting Minutes 11	
Meeting Minutes 12	

#### 1. Introduction

Team MDS02, supervised by Dr. Muhammad Fermi Pasha, consists of Foo Kai Yan, Alicia Quek Chik Wen, Eunice Lee Wen Jing, and Jesse Yow San Gene. The team focuses on developing a web-based Automated Health Information System that integrates Handwritten Text Recognition (HTR) and Image Cropping (ICROP) models. This report will explore the team's management approach, task allocation, individual contributions, and provide an assessment of the project's achievements and the challenges faced throughout its development.

# 2. Team Management Discussion

#### 2.1. Successes and Key Achievements

One of the main contributors to our project's success was the implementation of an Agile-Waterfall hybrid framework, which allowed us to adapt to evolving project needs while maintaining structure. We started with Agile, but as the project progressed, we integrated Waterfall methodology for web development tasks that required sequential completion.

The team had clearly defined roles, with Kai Yan as Scrum Master, Alicia managing the product backlog as Product Owner, and Eunice and Jesse handling development and testing. This clarity in responsibilities enabled smooth collaboration and task delegation. We effectively utilized Scrum artifacts like the Trello board and product backlogs, with regular sprint planning sessions and meetings ensuring that the team was aligned. Weekly sprints enabled flexibility, while regular internal and bi-weekly supervisor meetings helped track progress and address challenges promptly.

## 2.2. Opportunities Created

This project presented several valuable opportunities for skill development. On the technical side, we learned to build a complete web system from scratch, diving into web development using the MEAN stack framework. Additionally, we researched and implemented the HTR Model using TensorFlow. We also worked with OpenCV library to develop the ICROP model for extracting data fields from patient forms, gaining hands-on experience with cutting-edge technologies.

Beyond the technical scope, the project allowed us to deepen our understanding of project management. Using the Agile methodology frameworks, we learned best practices for task prioritization, time management, and resource allocation.

# 2.3. Challenges Faced

At the beginning, we were ambitious in setting sprint goals, often neglecting to account for unforeseen changes and additional workload from other academic units. Over time, we realized that our initial plan needed refinement, prompting us to switch to a Agile-Waterfall hybrid methodology, which helped balance flexibility with structure. Hence, one major challenge we faced was the integration of the HTR and ICROP models into the web application. This was mainly due to our lack of prior knowledge in machine and deep learning. Additionally, time management became difficult as

we juggled project deadlines and other academic responsibilities, which sometimes led to delays in our progress. These challenges taught us the importance of realistic goal-setting, time buffers, and the need for continuous learning, especially in technical areas where we had limited expertise.

#### 2.4. Actionable Adjustments for Future Projects

For future projects, starting earlier on the project implementation would be a key adjustment. More time should be allocated to the actual execution of the project, particularly for model development, rather than focusing heavily on report writing. This would allow for more thorough testing and refinement of models, which was an area where we felt there was room for improvement.

We also learned the importance of maintaining more frequent updates with our supervisor. While we communicated regularly as a team through WhatsApp, our updates to the supervisor were less frequent, typically occurring every two weeks through Discord. In the future, more consistent feedback loops with supervisors could help address challenges more promptly and ensure smoother progress throughout the project.

#### 3. Project Evaluation

One of our key successes was the significant advancement of both the HTR and ICROP models. The HTR model surpassed expectations by achieving high accuracy rates, even in the face of challenges like background noise and varying handwriting styles. The team diligently fine-tuned the model by exploring different methods to enhance its performance such as removing background shadows. Meanwhile, the ICROP model effectively preprocessed images and cropped relevant fields of the forms, streamlining the workflow. Additionally, we developed a responsive and interactive web application that showcased the functionality of both models. This user-friendly website features essential components such as Patient, Medication, Diagnosis, Prescription, Appointment, Encounter/Consultation and Physician. By effectively collaborating and communicating, both models were seamlessly integrated into the website, contributing greatly to the project's overall achievement.

A key shortcoming our team faced was time management. With most members juggling other unit commitments, allocating sufficient time to the project proved challenging which resulted in frequent delays and a sense of frustration. The pressure to complete the project ahead of schedule complicated planning and hindered efficient execution. Additionally, the team lacked sufficient technical skills related to the HTR and ICROP models which needed to be quickly learned within a short timeframe. This led to challenges in effectively implementing these critical components that caused some tasks to overlap and others to be rushed that ultimately affected the overall quality of our work.

#### 4. Individual Contributions Evaluation

#### 4.1. Member 1: Foo Kai Yan

Kai Yan displayed good leadership skills as a project manager with constant communication, which is demonstrated throughout the project development with weekly team meetings on individual progress updates. Such accountability applied by her, has made a significant impact on the project development as this ensures that everyone contributes constantly and completes their assigned tasks every week to avoid delay in project completion. Besides that, Kai Yan contributes greatly to the web-based system with constant progress every week, withholding her task responsibilities. Moreover, Kai Yan went the extra mile in beautifying our system to ensure a user-friendly interface. Overall, her involvement in the project is significant.

#### 4.2. Member 2: Alicia Quek Chik Wen

Alicia demonstrated strong initiative in taking responsibility by collaborating closely with her partner and the model sub-team as a technical lead. She demonstrated her competency and dedication to the project's success by constantly relaying her progress to her partner and the team whilst ensuring her work aligned with the project goals. She has also effectively managed the intricate components of the web application, which demonstrated her adept problem-solving skills and comprehensive grasp of the technical needs. Furthermore, Alicia carried out the testing plans and web-model integration with accuracy, facing challenges with resilience and creativity. Her involvement greatly propelled the project forward, and her influence on our project is immeasurable.

#### 4.3. Member 3: Eunice Lee Wen Jing

Eunice exhibited exceptional technical skills as the primary coder for the ICROP model. She demonstrated a strong grasp of image preprocessing techniques. Her effective collaboration with the team enabled the successful integration of the HTR and ICROP models showcasing her commitment to project goals. Eunice consistently communicated her progress and challenges that fostered a collaborative environment that benefited everyone. She also took the initiative to design and fill out the necessary patient forms ensuring the HTR model had sufficient test cases. Her attention to detail and dedication to creating an efficient workflow significantly enhanced the project's overall functionality making her contributions crucial to its success.

#### 4.4. Member 4: Jesse Yow San Gene

As the Model Tech Leader, Jesse played an important role in directing the team through the configuration and installation of the HTR model environment and libraries. He experimented with several handwriting styles and found that the model did well with cursive writing but had trouble with capital letters and other symbols. Jesse worked with Eunice to integrate the ICROP model with the HTR and adjusted the model to better fit the project's requirements. His leadership and technical expertise were key to improving the model's performance and ensuring the success of the project.

# 5. Project Task Allocation and Contribution

The project's main components consist of the web-based system and the smart data entry feature, which include the combination of the HTR model and the ICROP model. With that, the team decided to unanimously divide the team into two subgroups, each consisting of two members. Each subgroup was assigned to focus on one of the two major components of the automated health information

system to tackle the project effectively. The subgroups were allocated based on their strengths, thus Jesse and Eunice were assigned to handle the HTR and ICROP models, while Alicia and Kai Yan were assigned to handle the web-based system. Table 5.1. outlines the task contributions of each member.

Member	Tasks Contribution
Alicia Quek Chik Wen	<ol> <li>Handled the frontend and backend of the web-based system.</li> <li>Handled many main web components and their functionality, including Patient, Consultation, Diagnosis, Register Account, Login and Admin Authentication components, while functionality include add, delete, view, update and list.</li> <li>Handled the integration of the ICROP and HTR model into the web-based system.</li> </ol>
Foo Kai Yan	<ol> <li>Handled the frontend and backend of the web-based system.</li> <li>Handled many main web components and their functionality, including Medicine,         Appointment, Prescription, Physician, Homepage and HTML of Login and Register         components, while functionality include add, delete, view, update and list.</li> <li>Handled the navigation menu and bar of the web-based system.</li> </ol>
Eunice Lee Wen Jing	<ol> <li>Handled the ICROP model implementation with many different versions.</li> <li>Tested the ICROP model with various forms to find the right coordinates for accurate cropping.</li> <li>Created a physical patient form for testing.</li> <li>Handled the integration of the ICROP model into the HTR model.</li> </ol>
Jesse Yow San Gene	<ol> <li>Tested the prebuilt HTR model with different handwriting style and colours.</li> <li>Figured out the limitation of the HTR model, such as its inability to recognise certain symbols.</li> <li>Modified the HTR model to suit the project needs better.</li> </ol>

Table 5.1. Members Task Contribution

## 6. Team Dynamics and Issue Resolution

Given the demanding nature of the project and the team's commitment to other academic responsibilities, the team has faced some difficulties, including ongoing stress and burnout throughout the semester due to the intense workload of the deliverables

One main challenge encountered by the team throughout the whole project progress would be the difficulty to meet certain units' assessment deadlines on-time whilst producing quality results for the project. This frequently resulted in one or two team members forced to take over certain parts in the reports allocated to another team member to meet the set deadlines.

The team addresses the difficulties of meeting deadlines whilst producing quality work by creating a detailed project timeline with clear milestones and goals to meet the units' assessment and project requirements. The team prioritized tasks based on urgency and complexity, regularly reviewed progress during team meetings. Individual progress was constantly checked on during meetings to spot risks promptly during the development of the project.

## 7. Meeting Minutes

**Note**: Meeting Minutes 1 is added due to its relevance to the project progress throughout the unit but since it is conducted during the semester break, we understand it is not counted towards the total meeting minutes required for this unit. Therefore, extra meeting minutes are recorded in order to ensure that the total number of meeting minutes held in the unit meets the necessary requirements.

\_\_\_\_\_

-----

# FIT3164 Data Science Project 2

# MDS2 Meeting Minutes 1 Recorded by Alicia Quek Chik Wen

Date: 15th June 2024 Time: 8pm - 8.30pm Venue: Online Zoom

#### Participant Attendance:

- I. Alicia Quek Chik Wen
- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene

#### **Meeting Objectives:**

- I. Allocate tasks amongst the members
- II. Create and sign group contract
- III. Create and clone GitLab Repository to each member individual devices

#### Pre-work:

I. Kai Yan schedule and distribute work responsibilities and draft out group contract

No.	Item(s)	Discussion & Notes	
1	Task Allocation	<ul> <li>Split the team into 2 subteam, with each team focusing on 1 main aspect of the project:         <ul> <li>Web Development</li> <li>Allocated to Alicia and Kai Yan</li> <li>Handwritten Text Recognition (HTR) Model</li> <li>Allocated to Jesse and Eunice</li> </ul> </li> </ul>	
2	Web Development Team Tasks	<ul> <li>Revise on MEAN stack framework learned from FIT2095</li> <li>To be hopefully completed in 3 weeks</li> <li>Note: Maybe delayed due to Alicia having winter unit</li> <li>Start setting up the website</li> </ul>	
3	HTR Model Team Tasks	<ul> <li>Research on HTR model online</li> <li>To be hopefully completed in 3 weeks</li> </ul>	

		<ul> <li>Note: Maybe delayed due to Eunice having winter unit</li> <li>Learn to develop model from tutorials online if able to</li> </ul>
4	Next Meeting	• 22th July 2024

Responsibility	Action Items	Deadlines / Checkpoint
Kai Yan	Create GitLab Repository for the project	19th June 2024
Everyone	Clone GitLab Repository to their local machines	23th June 2024
Alicia and Kai Yan	Relearn and Revise on FIT2095 content	14th July 2024
Jesse and Eunice	Research on HTR model online	14th July 2024
TBD	Set up the website base	TBD (To be determined)

\_\_\_\_\_

-----

# FIT3164 Data Science Project 2

MDS2 Meeting Minutes 2 Recorded by Foo Kai Yan

Date: 22th July 2024 Time: 6pm - 6.30pm Venue: LT 5001

#### **Participant Attendance:**

- I. Alicia Quek Chik Wen
- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene

#### **Meeting Objectives:**

- I. All members are to update on their current work progress for the project
- II. Redistribute project tasks amongst the members

#### Pre-work:

- I. Kai Yan redistribute work responsibilities for the members
- II. Kai Yan create the web application base folder in GitLab

No.	Item(s)	Discussion & Notes	
1	Project Progress Discussion	<ul> <li>Jesse tried and failed to recreate the HTR model as described from research papers and from sample codes obtained online</li> <li>Kai Yan identified the 6 main components and their purposes required to make the web application</li> <li>Kai Yan had trouble with her laptop but has successfully create the base folder for the project and is pushed to GitLab for safekeeping</li> </ul>	

		<ul> <li>Kai Yan started on Medication component for the web application</li> <li>Alicia and Eunice yet to start due to busy and heavy workload from their Winter unit AMU2455</li> </ul>
2	Web Development Team Tasks Reallocation	<ul> <li>Jesse and Eunice learn on MEAN stack framework with FIT2095 learning materials provided by Alicia and Kai Yan         <ul> <li>To be hopefully completed by Week 3 or 4</li> </ul> </li> <li>Alicia and Kai Yan continue on with the assigned components of the web application</li> <li>Kai Yan has redistributed the web application components</li> </ul>
3	HTR Model Team Tasks	<ul> <li>On-hold until in-person meeting with the supervisor is held</li> <li>The meeting was requested to be held in Week 2</li> </ul>
4	Next Meeting	• 31th July 2024

Responsibility	Action Items	Deadlines / Checkpoint
Jesse and Eunice	Learn FIT2095 learning materials	11th August 2024
Alicia and Kai Yan	Start/Continue on the assigned work allocated	11th August 2024

------

-----

# FIT3164 Data Science Project 2

# MDS2 Meeting Minutes 3 Recorded by Eunice Lee Wen Jing

Date: 1st August 2024 Time: 3pm - 4pm Venue: Dr. Fermi's Office

#### **Participant Attendance:**

- I. Alicia Quek Chik Wen
- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene
- V. Dr. Muhammad Fermi Pasha

#### **Meeting Objectives:**

- I. Keep our supervisor updated on our progress
- II. Clarify our questions from supervisor
- III. Discuss items to purchase for our project

#### Pre-work:

- I. Booked an appointment with our supervisor
- II. All members prepare questions to clarify from supervisor

No.	Item(s)	Discussion & Notes
1	Project Progress Discussion With Dr. Fermi	<ul> <li>Jesse elaborate his situation to Dr. Fermi on the HTR model where he tried and failed to recreate the HTR model as described from research papers and from sample codes obtained online</li> </ul>
2	Update Web Development progress to Dr. Fermi	<ul> <li>Jesse and Eunice to continue learn on MEAN stack framework with FIT2095 learning materials provided by Alicia and Kai Yan         <ul> <li>To be completed by end of Week 3</li> </ul> </li> <li>Alicia and Kai Yan update to Dr. Fermi on current progress of the web application to Dr. Fermi</li> </ul>
3	HTR Model Team Tasks	<ul> <li>After discussion with Dr. Fermi, it is decided all members are to research on possible choices of pre-made HTR model found on the web and update on next meeting with Dr. Fermi</li> </ul>
4	Purchase Materials	After discussion with Dr. Fermi, we decided to purchase Cloud Storage Space for our project
4	Next Meeting	• 6th August 2024

Responsibility	Action Items	Deadlines / Checkpoint
Jesse and Eunice	Learn FIT2095 learning materials	11th August 2024
Alicia and Kai Yan	Start/Continue on the assigned work allocated	11th August 2024
All members	Start to work on Reflection Entry 1	9th August 2024
All members	Research on HTR model	11th August 2024

.....

-----

# FIT3164 Data Science Project 2

MDS2 Meeting Minutes 4 Recorded by Jesse Yow San Gene

Date: 6th August 2024 Time: 1pm - 2pm Venue: Hybrid

#### Participant Attendance:

- I. Alicia Quek Chik Wen
- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene

#### **Meeting Objectives:**

- I. Discuss lecture that was discussed this week
- II. Clarify tasks for the week
- III. Update each other on the progress

#### Pre-work: -

#### **Meeting Details:**

No.	Item(s)	Discussion & Notes	
1	Seminar Content Discussion	<ul> <li>Kai Yan shared her notes recorded from the seminar this week.</li> <li>Gained clarity on the progress status summary report, confirming that it will be an individual assessment.</li> <li>Discussed and understood the expectations for our reflections.</li> <li>Update Gantt Chart, risk registers and requirements traceability matrix.</li> </ul>	
2	Progress Update	<ul> <li>Jesse and Eunice still learning on MEAN stack framework with FIT2095 learning materials provided by Alicia and Kai Yan</li> <li>Alicia and Kai Yan still continuing on with the assigned components of the web application</li> </ul>	
3	Next Meeting	• 11th August 10.30pm (online meeting)	

#### **Action Items and Conclusion:**

Responsibility	Action Items	Deadlines / Checkpoint
Jesse and Eunice	Learn FIT2095 learning materials	11th August 2024
Alicia and Kai Yan	Start/Continue on the assigned work allocated	11th August 2024
All members	Start to work on Project Status Summary Report	11th August 2024
All members	Work on web application	11th August 2024

.....

-----

# FIT3164 Data Science Project 2

MDS2
Meeting Minutes 5
Recorded by Alicia Quek Chik Wen

Date: 11th August 2024 Time: 2pm - 3pm Venue: Hybrid

#### **Participant Attendance:**

- I. Alicia Quek Chik Wen
- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene

#### **Meeting Objectives:**

- I. Update the team of each member individual progress in the project
- II. Redistribution of project tasks
- III. Ensure everyone knows what their allocated task is for the Project Management Report
- IV. Discussion on the Interim Presentation presenter sequence

#### Pre-work:

- Kai Yan distribute and allocate the task for Project Management Report for each team member All members read and understand the assignment specification for Project Management Report II.

## **Meeting Details:**

No.	Item(s)	Discussion & Notes	
1	Project Progress Update	<ul> <li>Alicia completed backend and frontend of Register, and List All patient component, however there is a bug where registering patient led to invalid data page and data was not stored in mongodb.</li> <li>Kai Yan has completed backend and frontend of Register Medication component</li> <li>Jesse and Eunice completed their learning on MEAN stack framework with FIT2095 learning materials</li> </ul>	
2	Redistribution of tasks due to the risk of project delay.	<ul> <li>Jesse will be responsible for the HTR model in testing and understanding the system to enable integration to the web system.</li> <li>Eunice will be responsible for the image cutting model, researching and implementing the model to cut an image using fixed coordinates.</li> <li>Alicia and Kai Yan will take over the components that were delegated to Jesse and Eunice.</li> </ul>	
3	Allocated task for the Project Management Report	<ul> <li>Kai Yan will be responsible for the project management methodology aspect.</li> <li>Alicia will be responsible for project resources used in execution, management and planning.</li> <li>Eunice will be responsible for introduction as well as the introduction for project management and reflective assessment of the project management.</li> <li>Jesse will be responsible for Risk management and limitation aspect of the project</li> </ul>	
4	Interim Presentation presenter sequence	<ul> <li>Kai Yan will be presenting on software development methodology used, its issues and discussion on team management.</li> <li>Alicia will be presenting on work completed to date, including demoing the system and the progress overview relative to the original plan.</li> <li>Eunice will be presenting on the introduction aspect of the project and team, next step of the project and anticipated issue.</li> <li>Jesse will be presenting on problems and setbacks encountered and the steps taken to resolve the problems.</li> </ul>	
5	Next Meeting	• 21th August 2024	

#### **Action Items and Conclusion:**

Responsibility	Action Items	Deadlines / Checkpoint
Jesse	Familiarize himself on the pre-built HTR model	26th August 2024
	with testing	
Eunice	Conduct research on image cutting model	23th August 2024
Alicia and Kai Yan	Continue on with Patient and Medication component	26th August 2024
All Members	Project Management Report	23th August 2024

.....

-----

# FIT3164 Data Science Project 2

#### MDS2 Meeting Minutes 6 Recorded by Foo Kai Yan

Date: 21th August 2024 Time: 9am - 10am Venue: 7410A-Hibiscus

#### Participant Attendance:

I. Alicia Quek Chik Wen

- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene

#### **Meeting Objectives:**

- I. Practice Interim Presentation
- II. Update the team of each member individual progress on the Project Management Report and the project

#### Pre-work:

I. Each member to complete the assigned interim presentation slides and practices individual sections of the presentation at home before coming together to practice as a team

No.	Item(s)	Discussion & Notes
1	Web Application	<ul> <li>Alicia has completed Register, Delete and List All patient component         <ul> <li>Backend for Update and Display patient detail is done but not the frontend</li> </ul> </li> <li>Kai Yan has completed Register, Delete and List All Medication component         <ul> <li>Backend and frontend for Update and Display medication detail has not been started</li> </ul> </li> <li>Kai Yan has revamped the homepage of the web application</li> </ul>
2	Report Progress Update	<ul> <li>Kai Yan and Jesse has completed their assigned tasks for the report</li> <li>Alicia and Eunice is still completing their assigned tasks for the report</li> </ul>
3	HTR Model	<ul> <li>Jesse has not started testing the pre-built HTR model found online by Alicia due to assignments.</li> </ul>
4	Image Processing	Eunice still researching online regarding how to cut image at fixed sections
5	Presentation Practice	<ul> <li>Each member has arrived after practicing their individual sections of the presentation at home</li> <li>All practice ended with an average presentation time length of 11 minutes and 34 seconds</li> </ul>
6	Next Meeting	• 26th August 2024

Responsibility	Action Items	Deadlines / Checkpoint
Jesse	Familiarize himself on the pre-built HTR model	26th August 2024
Eunice	Understand the code found online on image cutting	26th August 2024
Alicia and Kai Yan	Continue on with Patient and Medication component	26th August 2024
All Members	Update project Progress Status Summary Report	25th August 2024

\_\_\_\_\_\_

-----

# FIT3164 Data Science Project 2

## MDS2 Meeting Minutes 7 Recorded by Eunice Lee Wen Jing

Date: 26th August 2024 Time: 10pm - 11pm Venue: Discord Meeting

#### **Participant Attendance:**

I. Alicia Quek Chik Wen

- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene

#### **Meeting Objectives:**

- I. Update the team of each member individual progress on the project
- II. Discuss the implementation of HTR Model

#### Pre-work:

I. Each member to complete the assigned task allocated to them on the project

No.	Item(s)	Discussion & Notes	
1	Web Application	<ul> <li>Alicia has completed partial of the update patient component         <ul> <li>Backend for Update and Display patient detail is done but not the frontend</li> </ul> </li> <li>Kai Yan has completed all the Medication components except the display function.         <ul> <li>Will continue work on Display medication detail</li> </ul> </li> </ul>	
3	HTR Model	<ul> <li>Jesse has tested out the pre-built HTR model</li> <li>HTR Model works for the expected input</li> <li>Will figure out if the model can recognize our own input.</li> </ul>	
4	Image Processing	<ul> <li>Eunice has coded out the simple image cutting model and tested on the simple input.</li> <li>Will try to implement the image cutting model for patient</li> </ul>	

		registration form	
5	Progress Status Summary Report	Kai Yan remind everyone to update their progress status on Progress     Status Summary Report	
6	Next Meeting	• 3rd September 2024	

Responsibility	Action Items	Deadlines / Checkpoint
Jesse	Test the HTR Model	3rd September 2024
Eunice	Test the image cutting model and apply it on patient registration form	3rd September 2024
Alicia and Kai Yan	Continue on with Patient and Medication component	3rd September 2024
All Members	Update project Progress Status Summary Report	3rd September 2024

.....

-----

## FIT3164 Data Science Project 2

MDS2 Meeting Minutes 8 Recorded by Jesse Yow San Gene

Date: 3rd September 2024 Time: 10pm - 11pm Venue: Discord Meeting

#### Participant Attendance:

- I. Alicia Quek Chik Wen
- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene

#### **Meeting Objectives:**

- I. Update the team of each member individual progress on the project
- II. Discuss the integration of HTR Model to website

#### Pre-work:

I. Each member to complete the assigned task allocated to them on the project

No.	Item(s)	Discussion & Notes	
1	Web Application	<ul> <li>Alicia has completed the frontend update patient component and resolved all identified bugs.</li> <li>Alicia has started on the diagnosis and encounter component.</li> </ul>	
		Kai Yan has completed the medication and prescription component and its	

		CRUD functions, including frontend and backend.  O Kai Yan has started on the physician and appointment component.	
3	HTR Model	<ul> <li>Jesse has tested out the pre-built HTR model         <ul> <li>Tested on multiple scenarios showing the limitations and strengths of the HTR model.</li> <li>Integrated CTC Word Beam Search Decoding algorithm to HTR model</li> <li>Next task is to train the HTR model to improve accuracy.</li> </ul> </li> </ul>	
4	Image Processing	<ul> <li>Eunice successfully tested her coded image cutting model for our registration form.</li> <li>Created the patient registration form</li> <li>Next task to implement image cutting model fully</li> </ul>	
5	Progress Status Summary Report	Kai Yan remind everyone to update their progress status on Progress     Status Summary Report	
6	Next Meeting	• 10th September 2024	

Responsibility	Action Items	Deadlines / Checkpoint
Jesse	Train the HTR Model	10th September 2024
Eunice	Fully implement image cutting model	10th September 2024
Alicia	Start on diagnosis and encounter component	10th September 2024
Kai Yan	Start on the physician and appointment component	10th September 2024
All Members	Update project Progress Status Summary Report	10th September 2024

------

-----

# FIT3164 Data Science Project 2

### MDS2 Meeting Minutes 9 Recorded by Alicia Quek Chik Wen

Date: 10th September 2024 Time: 4pm - 5pm Venue: Monash Foyer

#### **Participant Attendance:**

- I. Alicia Quek Chik Wen
- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene

#### **Meeting Objectives:**

I. Update the team of each member individual progress on the project

#### Pre-work:

I. Each member to complete the assigned task allocated to them on the project

# **Meeting Details:**

No.	Item(s)	Discussion & Notes	
1	Web Application	<ul> <li>Alicia has completed the diagnosis and encounter components, including add, list, delete and view diagnosis and encounter functions for both frontend and backend.</li> <li>Alicia has started on the login and register component by watching youtube tutorials</li> </ul>	
		<ul> <li>Kai Yan has completed the physician component and 80% of the appointment component, for both frontend and backend, which include add, delete, list and update.</li> <li>Kai Yan will proceed to finish up the last appointment function component, which is view appointment detail</li> </ul>	
3	HTR Model	<ul> <li>Jesse trained the HTR model using different dataset to attempt to improve accuracy of the HTR model. However, the model failed to outperform the pre-built HTR model in accuracy and consistency.</li> <li>Jesse will assist Eunice in understanding the HTR model and setting it up on her laptop to proceed in how to integrate HTR &amp; image cropping models and how to integrate them to the web.</li> </ul>	
4	Image Processing	<ul> <li>Eunice implemented a new image cutting model as the python version was not on par with the HTR due to pre-built HTR using an older version of python.</li> <li>The new image cutting model works as intended on the patient registration form which she designed.</li> <li>Will discuss with Jesse on Image-cutting model integration with HTR model.</li> </ul>	
5	Progress Status Summary Report	Kai Yan reminded everyone to finish up their progress status on the Progress Status Summary Report to be passed up on Friday.	
6	Next Meeting	• 16th September 2024	

# **Action Items and Conclusion:**

Responsibility	Action Items	Deadlines / Checkpoint
Jesse	Assist Eunice in understanding the HTR and set it up on her laptop.	16th September 2024
Eunice	Discuss with Jesse on how to seamlessly integrate HTR and the image cropping model together.	16th September 2024
Alicia and Kai Yan	Implement the login and registration components and finish up the view appointment detail component.	16th September 2024
All Members	Update project Progress Status Summary Report	13th September 2024
All Members	Submit project Progress Status Summary Report	13th September 2024

.....

-----

# FIT3164 Data Science Project 2

### MDS2 Meeting Minutes 10 Recorded by Foo Kai Yan

Date: 16th September 2024 Time: 9pm - 10pm Venue: Discord Meeting

#### Participant Attendance:

I. Alicia Quek Chik Wen

II. Eunice Lee Wen Jing

III. Foo Kai Yan

IV. Jesse Yow San Gene

#### **Meeting Objectives:**

I. Update the team of each member individual progress on the project

#### Pre-work:

I. Each member to complete the assigned task allocated to them on the project

Meeting Details:			
No.	Item(s)	Discussion & Notes	
1	Web Application	<ul> <li>Alicia has started on the login and registration component but it is yet to be completed.         <ul> <li>Alicia has also completed the backend for both components' where their backend sections were finished and tested using POSTMAN.</li> <li>Alicia has nearly finished implementing both authentication and encryption.</li> <li>Alicia plans to finish the implementation of authentication, encryption, cookies, as well as the login and registration components before the next meeting.</li> </ul> </li> <li>Kai Yan has fully completed the appointment component.         <ul> <li>Kai Yan is almost done with the navigation bar and menu.</li> <li>Kai Yan has completed the documentation for the backend of the web application which includes the models, controllers, routes, Database Services, and the server.js files.</li> <li>Kai Yan plans to start with the frontend for login and registration as well as to finish the navigation bar, navigation menu, and the rest of the documentations which includes the various components.</li> </ul> </li> </ul>	
3	HTR Model	<ul> <li>Jesse tried to improve the accuracy of the HTR model after the integration of the HTR model with the image cropping model.</li> <li>Jesse is tasked to understand and figure out how to integrate the combined model of HTR and Image Cropping model to the web application.</li> </ul>	

4	Image Processing	<ul> <li>Eunice successfully implemented the image processing and cutting model</li> <li>Eunice is tasked to figure out how to integrate the HTR model with the image cutting model where manual input is not required for the image cutting model to send the cut up image to the HTR model</li> </ul>
5	Next Meeting	• 22th September 2024

Responsibility	Action Items	Deadlines / Checkpoint	
Jesse	Figure out how to integrate the HTR model with the	22th September 2024	
	web application		
Eunice	Figure out how to automate the process of HTR	22th September 2024	
	model receiving the cut up and processed image		
	from the image cutting model		
Alicia	Finish the implementation of authentication,	22th September 2024	
	encryption, cookies, as well as the login and		
	registration components		
Kai Yan	Complete the frontend for register and login	22th September 2024	
	component. Finish up the navigation bar and menu		
	as well as the documentation for the whole web		
	application		

------

-----

# FIT3164 Data Science Project 2

MDS2 Meeting Minutes 11 Recorded by Foo Kai Yan

Date: 22th September 2024 Time: 1am - 3am Venue: Discord Meeting

#### **Participant Attendance:**

- I. Alicia Quek Chik Wen
- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene

#### **Meeting Objectives:**

I. Update the team of each member individual progress on the project

#### Pre-work:

I. Each member to complete the assigned task allocated to them on the project

No.	Item(s)	Discussion & Notes	
1	Web Application	<ul> <li>Alicia has completed the implementation of authentication, encryption, cookies, as well as the login and registration components.         <ul> <li>Alicia intends to look into the integration of the models with the web application</li> </ul> </li> <li>Kai Yan has fully completed the frontend for login and registration component. Navigation bar and menu is also completed. The documentation for the web application is also at 90% completion.         <ul> <li>Kai Yan intends to finish up the remaining documentation, which encompasses the login and registration aspects of the web application.</li> </ul> </li> </ul>	
3	HTR Model	<ul> <li>Jesse is tasked to understand and figure out how to integrate the combined model of HTR and Image Cropping model to the web application.</li> <li>Jesse is tasked to look into the pre-built HTR model to modify it so it provides the output in JSON format.</li> </ul>	
4	Image Processing	<ul> <li>Eunice successfully integrated the HTR model with the image cutting model where manual input is not required for the image cutting model to send the cut up image to the HTR model.</li> <li>Eunice is tasked to look into the pre-built HTR model to modify it so it provides the output in JSON format.</li> </ul>	
5	Next Meeting	• 3rd October 2024	

Responsibility	Action Items	Deadlines / Checkpoint	
Jesse	Figure out how to integrate the HTR model with the	3rd October 2024	
	web application		
Eunice	Figure out how to allow HTR model to provide	3rd October 2024	
	output in JSON format		
Alicia	ria Figure out how to integrate the HTR model with the		
	web application		
Kai Yan	Cai Yan Complete the remaining documentation		

.....

# FIT3164 Data Science Project 2

MDS2 Meeting Minutes 12 Recorded by Foo Kai Yan

Date: 3rd October 2024 Time: 3pm - 6pm Venue: Zoom Meeting

## **Participant Attendance:**

I. Alicia Quek Chik Wen

- II. Eunice Lee Wen Jing
- III. Foo Kai Yan
- IV. Jesse Yow San Gene
- V. Dr. Muhammad Fermi Pasha

#### **Meeting Objectives:**

- I. Update the team of each member individual progress on the project
- II. Allocate the tasks and responsibilities for the User Guide, Test Report, Software Demonstration, and Final Presentation
- III. Update Dr. Fermi on the teams' progress on the final year project

#### Pre-work:

- I. Each member to complete the previous assigned task allocated to them on the project
- II. Prepare the content on the project that will be demonstrated to Dr. Fermi

No.	Item(s)	Discussion & Notes	
1	Web Application	Alicia completed her part on figuring out how to integrate the models to the web application.	
		Alicia completed her part on figuring out how to integrate the models to	
2	Image Processing & HTR Model	<ul> <li>Alicia completed her part on figuring out how to integrate the models to the web application.</li> <li>Kai Yan has fully completed the documentation for the web application.</li> <li>Eunice and Jesse have figured out how to allow HTR models to provide output in JSON format. Eunice notified Alicia when she was integrating the models and the web application.</li> <li>Pre-Declaration form was filled in and submitted in Moodle on 26th September 2024</li> <li>Kai Yan has assigned and distributed the task allocation for User Guide, Test Report, Software Demonstration, and Final Presentation and the members have gone through and agreed on the parts assigned to them.</li> <li>Due to a miscommunication, Dr. Fermi could only attend the meeting at 4:30pm so from the time 3pm to 4:30pm the team was discussing the task allocations on the reports and presentation as well as updating each other on the project progress status.</li> <li>Alicia demonstrated the project to Dr. Fermi in hopes of obtaining useful feedbacks from him         <ul> <li>Dr. Fermi raised issues about the project not being on the Cloud and urged the team to deploy it. However, the team mutually agreed not to deploy the project due to everyone's busy schedules on Week 11. Time constraints were the main reason for this decision as one member has 7 assessments due on 11th October.</li> <li>Dr. Fermi informed us about the initial bugs he found, one of which was an appointment still appearing on the list despite already being completed. Another bug was how the HTR model couldn't display the extracted birth date from the form. Alicia fixed these</li> </ul> </li> </ul>	
3	User Guide, Test Report, Software Demonstration, and Final Presentation	<ul> <li>September 2024</li> <li>Kai Yan has assigned and distributed the task allocation for User Guide, Test Report, Software Demonstration, and Final Presentation and the</li> </ul>	
4	Update Dr. Fermi	<ul> <li>4:30pm so from the time 3pm to 4:30pm the team was discussing the task allocations on the reports and presentation as well as updating each other on the project progress status.</li> <li>Alicia demonstrated the project to Dr. Fermi in hopes of obtaining useful feedbacks from him <ul> <li>Dr. Fermi raised issues about the project not being on the Cloud and urged the team to deploy it. However, the team mutually agreed not to deploy the project due to everyone's busy schedules on Week 11. Time constraints were the main reason for this decision as one member has 7 assessments due on 11th October.</li> <li>Dr. Fermi informed us about the initial bugs he found, one of which was an appointment still appearing on the list despite already being completed. Another bug was how the HTR model couldn't display the extracted birth date from the form. Alicia fixed these</li> </ul> </li> </ul>	
5	Next Meeting	will mainly be done on Whatsapp to update the team on their assigned tasks on the unit's assessments reports and presentation if required.	

		•	or on any communication platform with a less formal environment. The team will meet on 14th October 2024 at 10am in a booked room in Hive to practice presentation before the official presentation conducted at 4pm in Lecture Hall 5001.
--	--	---	--

Responsibility	Action Items	Deadlines / Checkpoint
Jesse	Submit Pre-Declaration form on Moodle for Team	11th October 2024
Eunice	management report	11th October 2024
Alicia		11th October 2024
Kai Yan		11th October 2024
Jesse	Complete User Guide and Test Report	11th October 2024
Eunice		11th October 2024
Alicia		11th October 2024
Kai Yan		11th October 2024
Jesse	Prepare for Software Demonstration and Final	14th October 2024
Eunice	Presentation	14th October 2024
Alicia		14th October 2024
Kai Yan		14th October 2024

------

-----