




WEEKLY BLOG

Year 3 Final Project

Sulthana Safeer

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Week 13

Meet My Supervisor






Dr. Maha Saadeh received her PhD degree in computer science from the University of Jordan in 2018. She worked as adjunct lecturer at the computer science department, The University of Jordan. She is currently working as a Senior lecturer in the school of science and technology, computer engineering and informatics department, Middlesex University Dubai, UAE. Dr. Saadeh has experience in teaching artificial intelligence, machine learning, data science, computer networks and network security for undergraduate and postgraduate students. Dr. Saadeh is a member of the ROBOTECHx Lab under Middlesex university Centre for Innovation In Human Experience. She is also part of the Research committee at the University. She has a number of publications in different reputable international journals and conferences. Her research interests are artificial intelligence, machine learning, data science, and network security. Embarking on the final project journey with Dr. Maha has been an illuminating experience, marked by guidance, support, and an unwavering commitment to academic excellence.



Meeting Log

Supervisor: Dr Maha Saadeh

Project: ML and DL based emotion detector

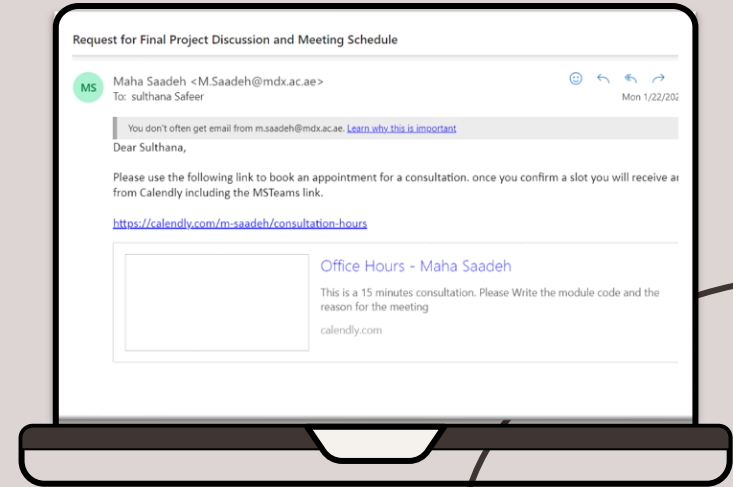
Dates	Meeting Duration	Description	Signature
25/01/24	15 min	Meeting with Dr Maha, Project Approval	
1/02/24	20 min	First Cut Proposal	
8/02/24	30 mins	Final cut proposal, research ethics screening form, WBS, Gant chart approval	
15/02/24	35 mins	Presenting the current project, application research ethics form and Final cut proposal.	
22/03/24	25 mins	To show my project and start the report	

Week 13

Mr. Roshan and Dr. Fehimida introduced us to the course, explaining how it works and what procedures we must complete over the semester. They assisted us in delegating tasks to our supervisors.

I emailed my supervisor, Dr Maha Saadeh and was assigned an appointment on a team call to get the project approved. I explained my project and mentioned it was a desktop application.

Dr Maha Approved my Project.
Started working on first and final cut proposal.



Week 14

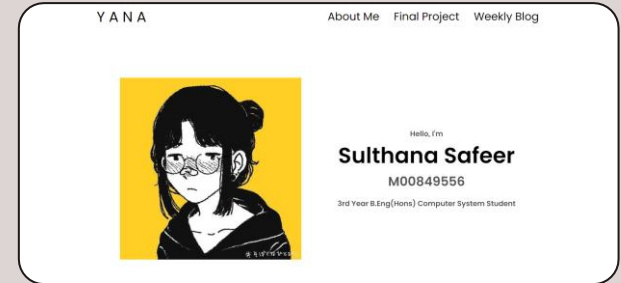
- >Made a Website using HTML, CSS and JS
- >Uploading My Final Cut proposal.
- >Weekly Meeting and Feedback Session with Dr Maha at 5pm.

She assigned me tasks for my proposal and instructed me to revise my Gannt chart and add few more descriptions for my final cut proposal. Then we talked about the ethics form and why it was necessary for the project. We ended the day by discussing the ethical questions that will be asked, as well as the project's outcome.

- > Rest of the week I worked on Gannt chart and WBS



PDE31122final(Formal) Proposal template.pdf



Week 15

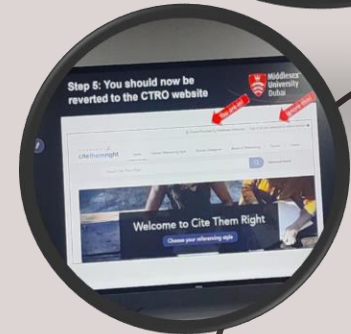
>This week, we attended an informative session led by Mrs. Laura from the library and Mrs. Siobhan from CAS, Central Academic Success.

They provided important insights into how to effectively use ChatGPT, a platform that helps us get a full picture of our projects. She advised us on how to use this technology to improve our comprehension and speed the study process.

We played Kahoots and had an interactive session.

>They showed us how to collect references and journals from the library, Unihub, and Google Scholars, as well as a few websites that will help us write a better report and do literature reviews.

Since we are using IEEE reference, they showed us how to create reports according to it, as well as how to include references and paraphrase reports in order to avoid plagiarism and academic misconduct.

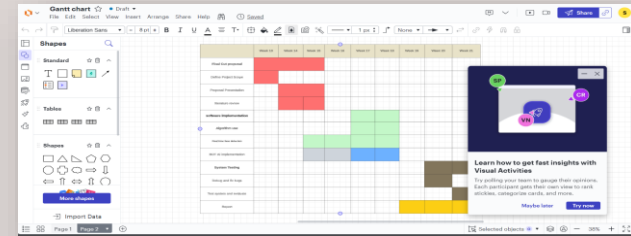


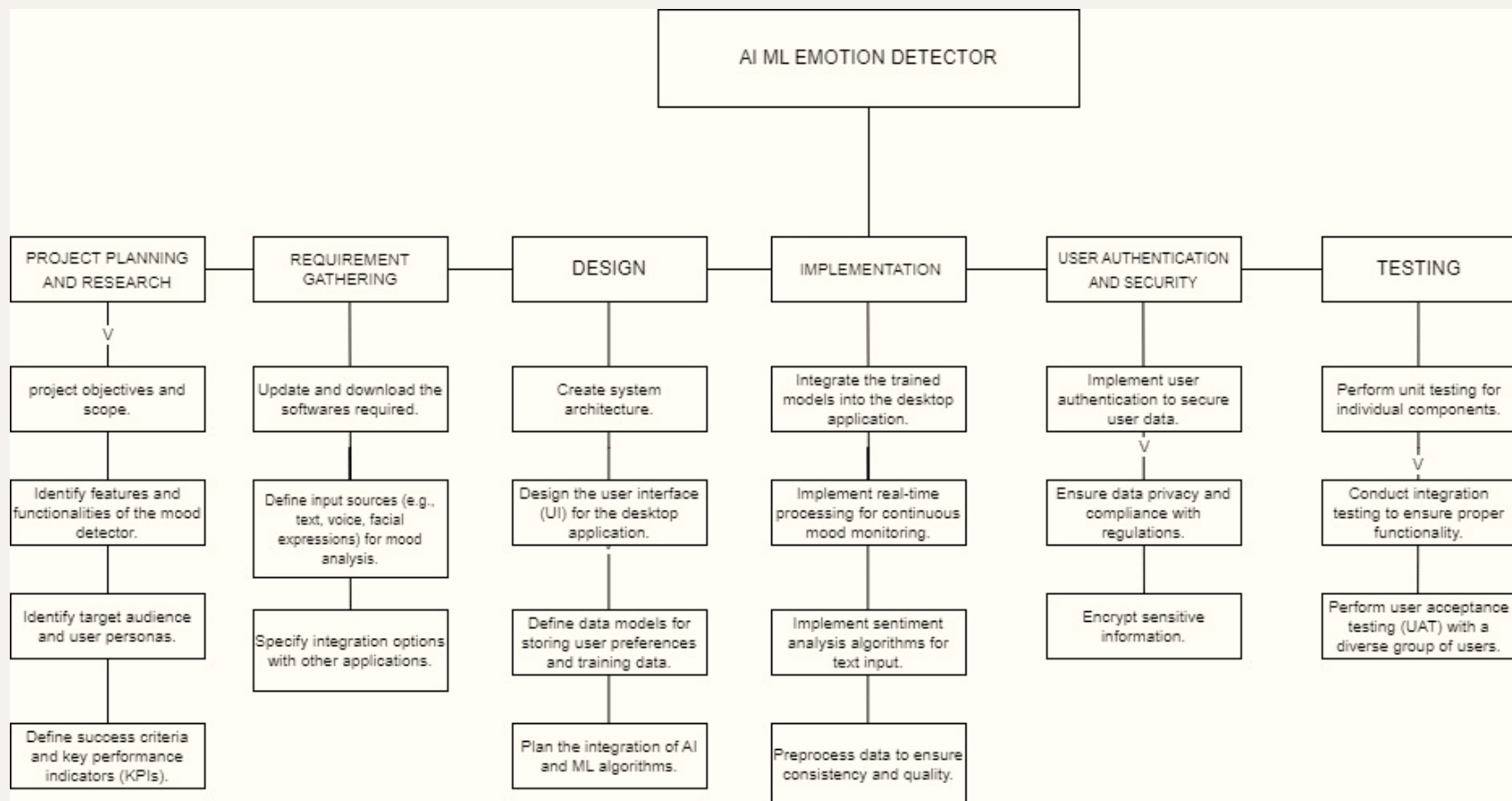
Week 15

At 5:30 Pm, I had a meeting with Dr Maha, she gave me feedback on what I must edit for Final cut proposal and My Gant chart to get her signature. She told me to edit my methodology and end results of my Gant chart.

We later spoke about my website, how I implemented HTML, CSS and JavaScript for my website. I asked her again, if the project is a good idea and if I should start doing it. she answered positively and told me to go ahead with it.

> Later this week, **I edited my blog, Gant chart, WBS, ethics form and literature review (3k words).**





Week 16

This week, Mr. Roshan spoke about Literature review / report and what all things we should be covering as topics, which includes:

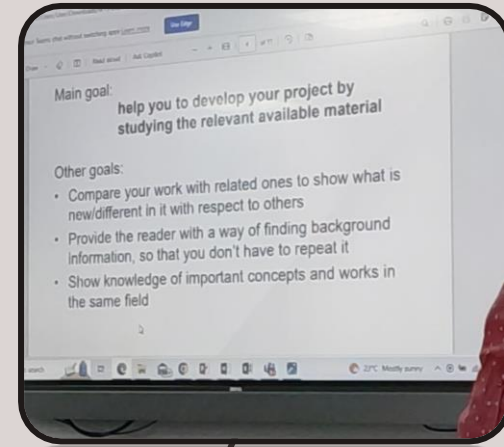
Aim and object, plan and implementation, algorithm used , result testing and valuation, critical analysis and conclusion.

I showed my literature review to Mr. Roshan and his feedback was I need to add more details regarding the algorithm

Around 1:30pm, Ms. Engie gave a session/workshop about UX/UI. We received great insights for designing user-friendly interfaces.

Designers were advised to stress intuitive navigation, visual appeal, and usability. By concentrating on user comfort, designers may improve the overall user experience and encourage good interactions..

Wireframing was introduced as an important phase in the design process. She described wireframes as skeletal constructs that outline the layout and functioning of an interface. We received practical experience in creating wireframes using Figma, a powerful and collaborative design tool.



Week 16

At 5:15, I went to meet with Dr. Maha to present her the adjustments I had made to my final cut proposal and Gant chart. I had to make another edit to acquire her signature. We discussed which method I should use for my ML-based project and why I need an ethics form. Later I had the document signed, and she read my literary review. At the end of the discussion, she advised me to fill out the study ethics application.



**Middlesex
University
Dubai**

10. Will the outputs from your research (e.g., products, reports, publications, etc.) likely cause any harm to you, others, or to society; or have legal issues? ☐ Yes ☒ No

If you have answered 'Yes' to ANY of the above questions, your application requires ethical review and approval prior to commencing your research. Please complete the 'Application for Ethical Approval for Research Projects for Students' form

If you have answered 'No' to ALL of the above questions, your application may not require ethical review and approval before commencing your research. Your research supervisor will confirm this below.

Student Signature:  Date: 7/02/24

To be completed by the supervisor:

Based on the details provided in the self-assessment form, I confirm that:	
The study does not require ethical review and approval	<input type="checkbox"/>
The study requires ethical review and approval	<input checked="" type="checkbox"/>

Supervisor Signature:  Date: 8/2/2024

Week 16



Patient Details

I started working on the software in Python and used Tkinter to create desktop applications. I designed the background, icons, and color palette for the mood detection app.

According to my Gant chart, I was supposed to start implementing software on week 17, however I started on week 16. The OPEN window features six icons: patient details, face scanner, support desk, train data, developer, and chatbot. I'm nearly done with implementing software for patient information.

> Next, use MySQL to implant a data collection including patient information.

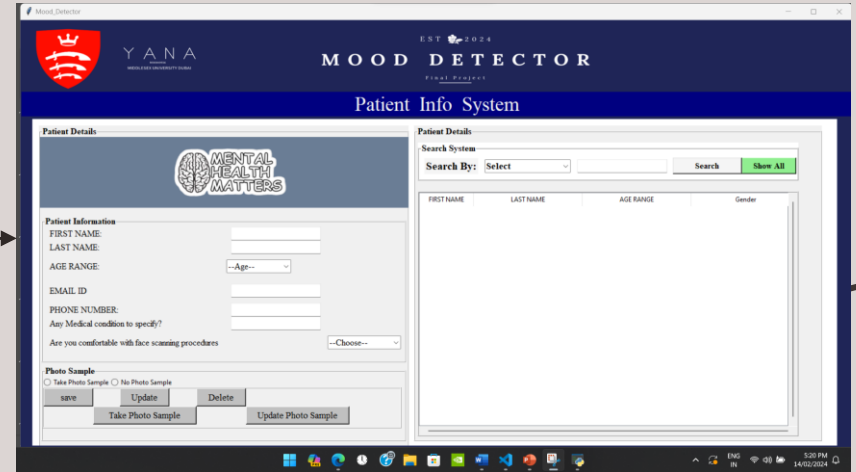
```

File Edit Selection View Go Run ... face_recognition_system
main.py x patient.py ttk.py
main.py > face_recognition_system > patient_details
1 from tkinter import*
2 from tkinter import ttk
3 from typing import Self
4 from PIL import Image,ImageTk
5 from patient import Patient
6
7
8 class face_recognition_system:
9     def __init__(self,root):
10         self.root=root
11         self.root.geometry("1530x790+0+0")
12         self.root.title("Mood Detector")
13
14 #first image
15 img1=Image.open(r"C:\Users\sulthana safeer\Desktop\face_recognition_system\
16 img1=img1.resize((500,150),Image.LANCZOS)
17 self.PhotoImage1=ImageTk.PhotoImage(img1)
18
19 f_lbl=Label(self.root,image=self.PhotoImage1)
20 f_lbl.place(x=0,y=0,width=500,height=150)
21
22 PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS
23 PS C:\Users\sulthana safeer\Desktop\face_recognition system>
24
25 master 0 0 0 0 Ln 146,
  
```

Week 16



Patient Details



> Need to fix the alignment for save,update,delete..etc; patient details.

Week 17

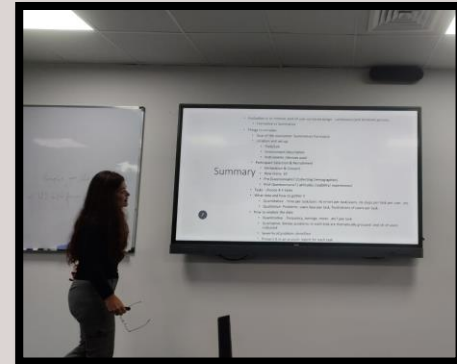
This week's class was led by Ms. Engie and Mr. Roshan.

Ms. Engie conducted a workshop on UX and Usability testing, explaining why and how it is done. Then, many forms of usability testing were discussed. There are two types of evaluations: formative and summative. Formative assessment is a continuous method of testing design components during the development process, whereas summative assessment is the final testing of the final system.

Mr. Roshan led a class on research questions, explaining how to frame a research topic.

Formative vs summative evaluation

- **Formative** evaluation seeks insight to influence design
 - **Answers the Q:** How can this system be improved?
 - check understanding of users' needs
 - check continues to meet needs
- **Summative** evaluation tests how well a final system meets requirements
 - **Answers the Q:** Is this system as good as it needs to be?
 - meets standards, e.g. ISO
 - compare with other systems
 - compare with previous versions



Week 17



Patient Details

Worked on database of the application using MySQL and connected to my tkinker application. In my Mood detector application, all the data will be saved in MySQL and will be shown in the table next to the registration box.

Tried aligning the save, update, delete buttons. Failed.

Had a meeting with Dr Maha and worked on ethical application and showed her the progress.

FIRST NAME	LAST NAME	AGE RANGE	EMAIL ID
Sulthana	safer	17-25	saifga@gmail.com
Sulthana	safer	17-25	saifga@gmail.com
Sulthana	safer	20-40	saifga@gmail.com
Sulthana	safer	13-17	saifga@gmail.com
Sulthana	safer	17-25	saifga@gmail.com

first_name	last_name	age_range	email	phone	photo	medic
Sulthana	safer	17-25	saifga@gmail.com	12345678	yes	yes
Sulthana	safer	17-25	saifga@gmail.com	12345678	yes	yes
Sulthana	safer	20-40	saifga@gmail.com	12345678	yes	yes
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Sulthana	safer	17-25	saifga@gmail.com	12345678	yes	yes

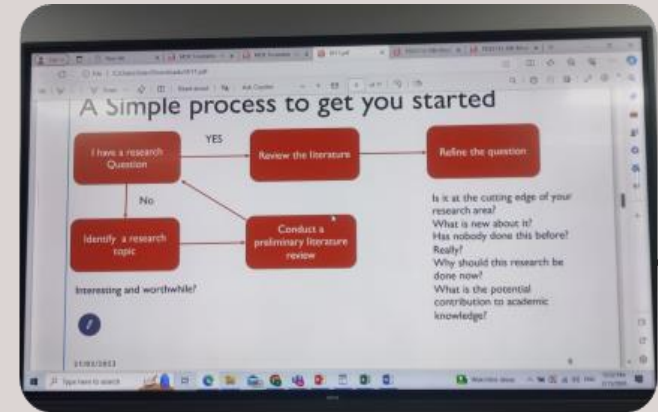


Week 18

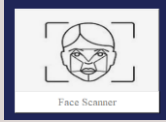
This week our professor, At 12pm Mr. Roshan told us to focus on the UML diagrams of our projects.

He also made us look through sample reports and comparing the similarities and how to make the reports more interactive by adding and focusing on methodologies, explanation of the code, research questions and more. I tried looking over some few samples from previous years and checked google scholars for more samples.

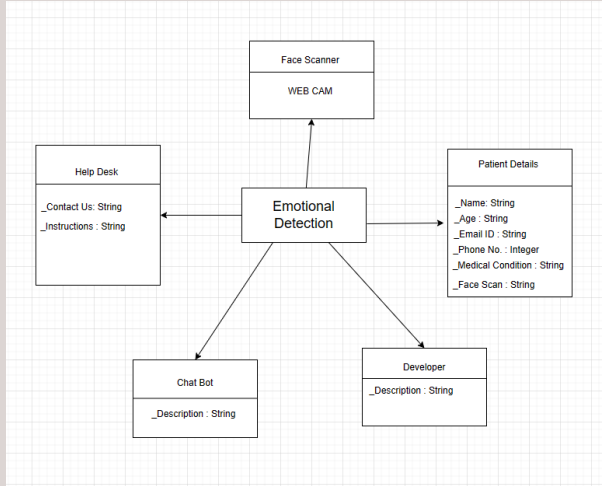
As per my observation, literature review and analyzing which methodology takes more understanding and time.



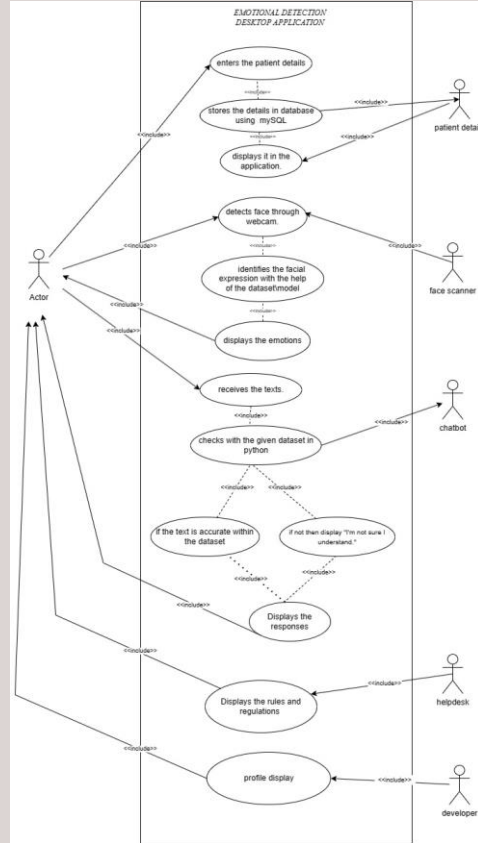
Diagrams



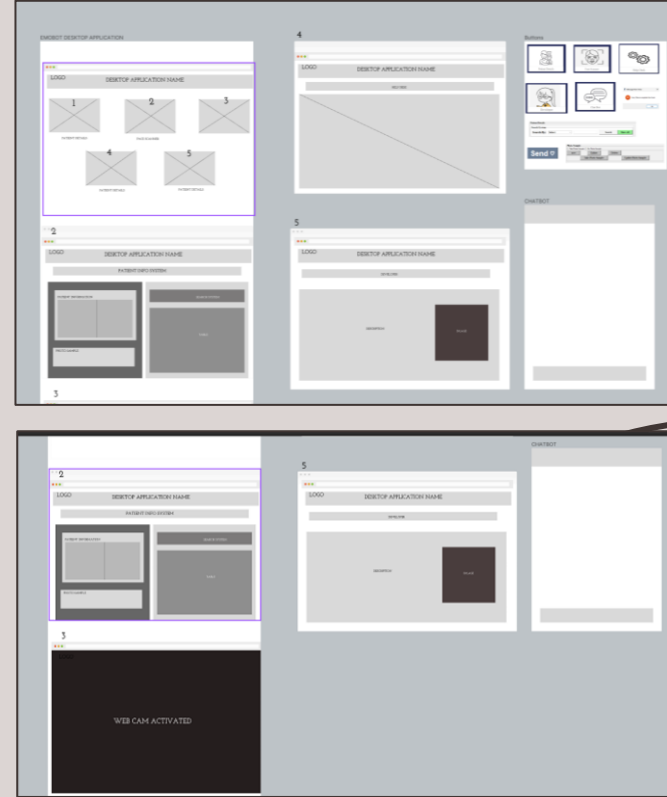
UML Diagram



USE CASE DIAGRAM.



WIREFRAME

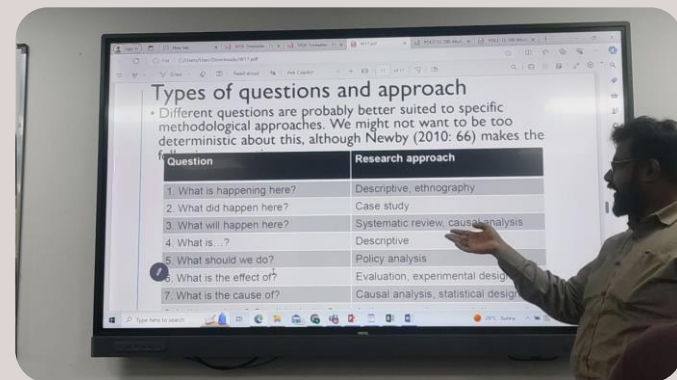


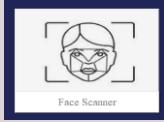


Week 19

At 11:30, Mr. Roshan focused about how important it is to choose a programming language. As I already choose my programming language which is python because its easy to implement ML codes and models. So, the lecture was useful and understanding.

He highlighted how we should choose our programming language depending on our project requirements, team expertise, scalability factors and more. Troubleshoots are often part of the coding journey and we should take it as a challenge to overcome the hurdles to get a successful project.





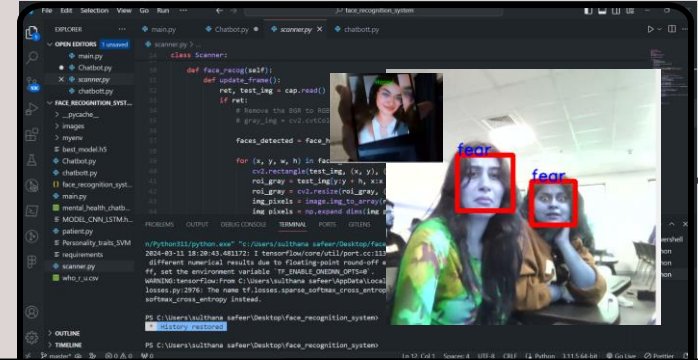
Week 19

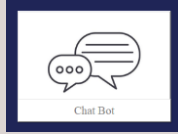
This week, I decided to work on my machine learning part of the project where I had to use, google collaboration for running the model, data sets, CNN algorithm and imported os, OpenCV, NumPy and Keras in Visual code studio. It took few days to get the scanner connected to the application as a new window but got it working at the end.

Didn't meet my supervisor this time.

After adding the code to Visual Code studios, I tested the application
With my friends.

To Work On: Add more dataset.





Week 20

This week, I decided to work on the Ai Chatbot for the application.

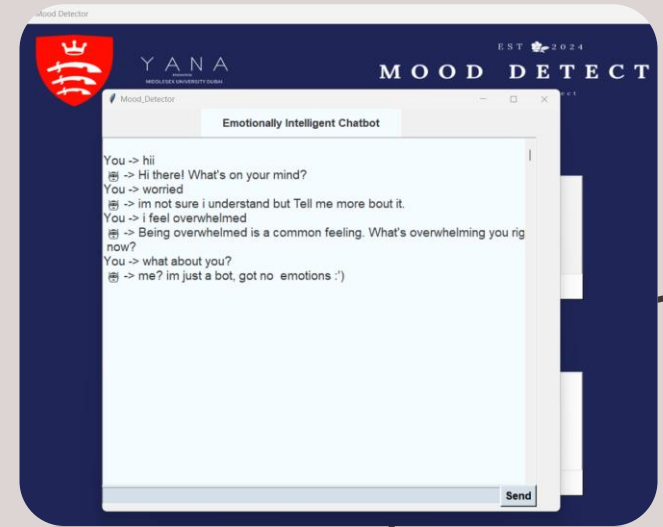
Researched few papers and worked on the functioning and how it can be implemented. But unfortunately, my visual code studio kept crashing due to the change of interpreter. I had to change my interpreter from python 3.12 to 3.11.4 because TensorFlow didn't work using 3.12. Due to the change of interpreter, and me not adding venv to the project, the python project kept crashing when I coded AI chatbot.

I downloaded the excel dataset which consist of 10k lines of code but couldn't implement it in on the project.

So, I decided to work on a normal chatbot which could be accessible and Implemented my own dataset in the code so it would give out responses.

No class, we had reading week.

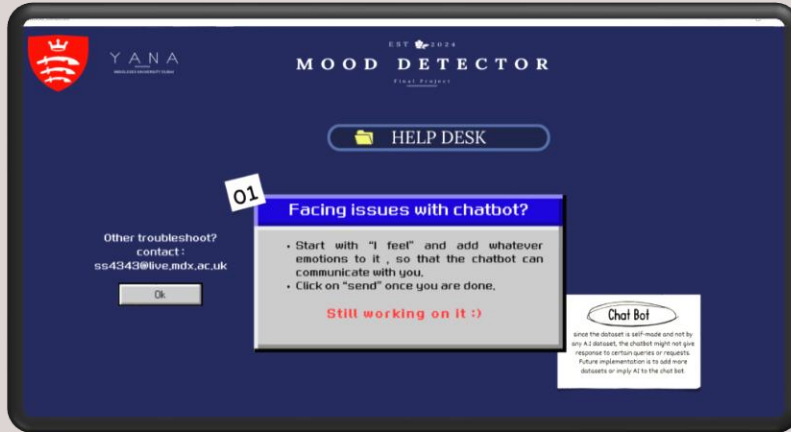
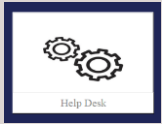
Didn't meet my supervisor this time.



Week 20

Mr. Roshan told us to focus on testing and implementation this week, and work on our report.

Completed the desktop application and its functionalities. Added help desk and developers using tkinker.



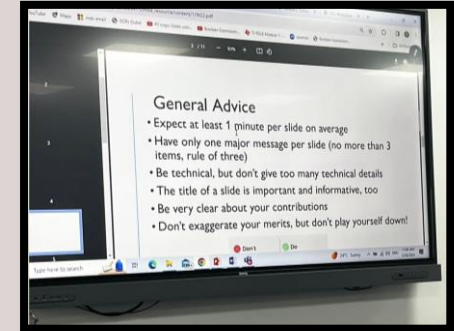
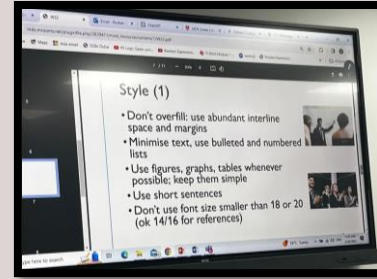
Dr. Maha told me to start working on my report.

	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26
Final Cut proposal									
Define Project Scope									
Proposal Presentation									
literature review									
software implementation									
Algorithm use									
Real time face detection									
BOT AI implementation									
System Testing									
Debug and fix bugs									
Test system and evaluate									
Report									

Week 22

Mr. Roshan told us to work on report this week and complete our blog for submission. He also explained about the ethical concerns and copyrights for the project perspective. He also gave us advices on how to do our presentation so that we don't stress.

This marks as the end of the blog for PDE 3112.



<p>Table of Contents</p> <p>1. Chapter 1-Introduction 2</p> <p>2. Chapter 2-Systemic Literature Review 10</p> <p>3. Chapter 3-Methodology 15</p> <p>4. Chapter 4-Results 25</p> <p>5. Chapter 5-Discussion 35</p> <p>6. Chapter 6-Conclusion 45</p> <p>7. Chapter 7-References 55</p> <p>8. Chapter 8-Appendix 65</p> <p>9. Chapter 9-Appendix 75</p> <p>10. Chapter 10-Appendix 85</p> <p>11. Chapter 11-Appendix 95</p> <p>12. Chapter 12-Appendix 105</p> <p>13. Chapter 13-Appendix 115</p> <p>14. Chapter 14-Appendix 125</p> <p>15. Chapter 15-Appendix 135</p> <p>16. Chapter 16-Appendix 145</p> <p>17. Chapter 17-Appendix 155</p> <p>18. Chapter 18-Appendix 165</p> <p>19. Chapter 19-Appendix 175</p> <p>20. Chapter 20-Appendix 185</p> <p>21. Chapter 21-Appendix 195</p> <p>22. Chapter 22-Appendix 205</p> <p>23. Chapter 23-Appendix 215</p> <p>24. Chapter 24-Appendix 225</p> <p>25. Chapter 25-Appendix 235</p> <p>26. Chapter 26-Appendix 245</p> <p>27. Chapter 27-Appendix 255</p> <p>28. Chapter 28-Appendix 265</p> <p>29. Chapter 29-Appendix 275</p> <p>30. Chapter 30-Appendix 285</p> <p>31. Chapter 31-Appendix 295</p> <p>32. Chapter 32-Appendix 305</p> <p>33. Chapter 33-Appendix 315</p> <p>34. Chapter 34-Appendix 325</p> <p>35. Chapter 35-Appendix 335</p> <p>36. Chapter 36-Appendix 345</p> <p>37. Chapter 37-Appendix 355</p> <p>38. Chapter 38-Appendix 365</p> <p>39. Chapter 39-Appendix 375</p> <p>40. Chapter 40-Appendix 385</p> <p>41. Chapter 41-Appendix 395</p> <p>42. Chapter 42-Appendix 405</p> <p>43. Chapter 43-Appendix 415</p> <p>44. Chapter 44-Appendix 425</p> <p>45. Chapter 45-Appendix 435</p> <p>46. Chapter 46-Appendix 445</p> <p>47. Chapter 47-Appendix 455</p> <p>48. Chapter 48-Appendix 465</p> <p>49. Chapter 49-Appendix 475</p> <p>50. Chapter 50-Appendix 485</p> <p>51. Chapter 51-Appendix 495</p> <p>52. Chapter 52-Appendix 505</p> <p>53. Chapter 53-Appendix 515</p> <p>54. Chapter 54-Appendix 525</p> <p>55. Chapter 55-Appendix 535</p> <p>56. Chapter 56-Appendix 545</p> <p>57. Chapter 57-Appendix 555</p> <p>58. Chapter 58-Appendix 565</p> <p>59. Chapter 59-Appendix 575</p> <p>60. Chapter 60-Appendix 585</p> <p>61. Chapter 61-Appendix 595</p> <p>62. Chapter 62-Appendix 605</p> <p>63. Chapter 63-Appendix 615</p> <p>64. Chapter 64-Appendix 625</p> <p>65. Chapter 65-Appendix 635</p> <p>66. Chapter 66-Appendix 645</p> <p>67. Chapter 67-Appendix 655</p> <p>68. Chapter 68-Appendix 665</p> <p>69. Chapter 69-Appendix 675</p> <p>70. Chapter 70-Appendix 685</p> <p>71. Chapter 71-Appendix 695</p> <p>72. Chapter 72-Appendix 705</p> <p>73. Chapter 73-Appendix 715</p> <p>74. Chapter 74-Appendix 725</p> <p>75. Chapter 75-Appendix 735</p> <p>76. Chapter 76-Appendix 745</p> <p>77. Chapter 77-Appendix 755</p> <p>78. Chapter 78-Appendix 765</p> <p>79. Chapter 79-Appendix 775</p> <p>80. Chapter 80-Appendix 785</p> <p>81. Chapter 81-Appendix 795</p> <p>82. Chapter 82-Appendix 805</p> <p>83. Chapter 83-Appendix 815</p> <p>84. Chapter 84-Appendix 825</p> <p>85. Chapter 85-Appendix 835</p> <p>86. Chapter 86-Appendix 845</p> <p>87. Chapter 87-Appendix 855</p> <p>88. Chapter 88-Appendix 865</p> <p>89. Chapter 89-Appendix 875</p> <p>90. Chapter 90-Appendix 885</p> <p>91. Chapter 91-Appendix 895</p> <p>92. Chapter 92-Appendix 905</p> <p>93. Chapter 93-Appendix 915</p> <p>94. Chapter 94-Appendix 925</p> <p>95. Chapter 95-Appendix 935</p> <p>96. Chapter 96-Appendix 945</p> <p>97. Chapter 97-Appendix 955</p> <p>98. Chapter 98-Appendix 965</p> <p>99. Chapter 99-Appendix 975</p> <p>100. Chapter 100-Appendix 985</p>	<p>1. Chapter 1-Introduction</p> <p>1.1 Introduction and Background</p> <p>1.2 Problem Statement</p> <p>1.3 Objectives</p> <p>1.4 Scope</p> <p>1.5 Significance</p> <p>1.6 Organization of the Chapter</p>	<p>2. Chapter 2-Systemic Literature Review</p> <p>2.1 Introduction</p> <p>2.2 Methodology</p> <p>2.3 Results</p> <p>2.4 Discussion</p> <p>2.5 Conclusion</p>	<p>3. Chapter 3-Methodology</p> <p>3.1 Introduction</p> <p>3.2 Research Design</p> <p>3.3 Data Collection</p> <p>3.4 Data Analysis</p> <p>3.5 Results</p> <p>3.6 Discussion</p> <p>3.7 Conclusion</p>
<p>4. Chapter 4-Results</p> <p>4.1 Introduction</p> <p>4.2 Results</p> <p>4.3 Discussion</p> <p>4.4 Conclusion</p>	<p>5. Chapter 5-Discussion</p> <p>5.1 Introduction</p> <p>5.2 Discussion</p> <p>5.3 Conclusion</p>	<p>6. Chapter 6-Conclusion</p> <p>6.1 Introduction</p> <p>6.2 Conclusion</p>	<p>7. Chapter 7-References</p> <p>7.1 Introduction</p> <p>7.2 References</p>