

**SRI LANKA INSTITUTE OF
INFORMATION TECHNOLOGY**



**Smart System to Optimize Organic Crop Rotation Using
Precision Agriculture Data**

ID No:IT20244552

Name:Ranasinghe R.A.D.M

Batch:Software Engineering

Project ID:2023-113

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1. Microsoft Teams Calls

1.1 Teams calls with research Team

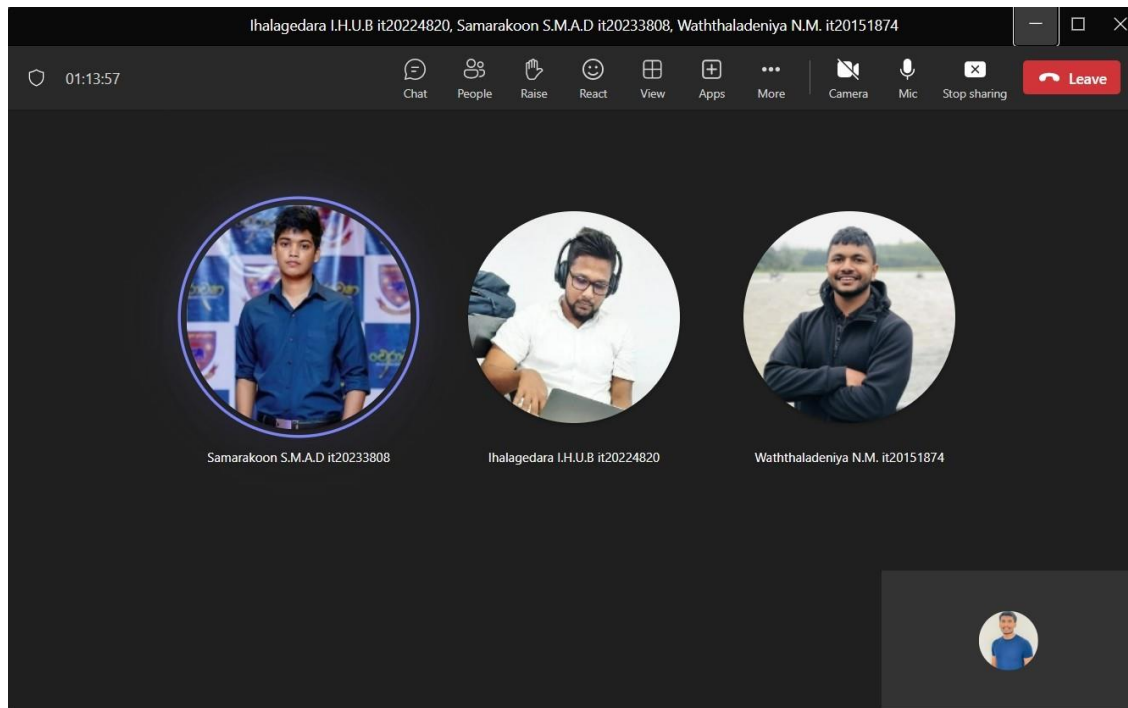


Figure 1 Teams call 1 with Research team

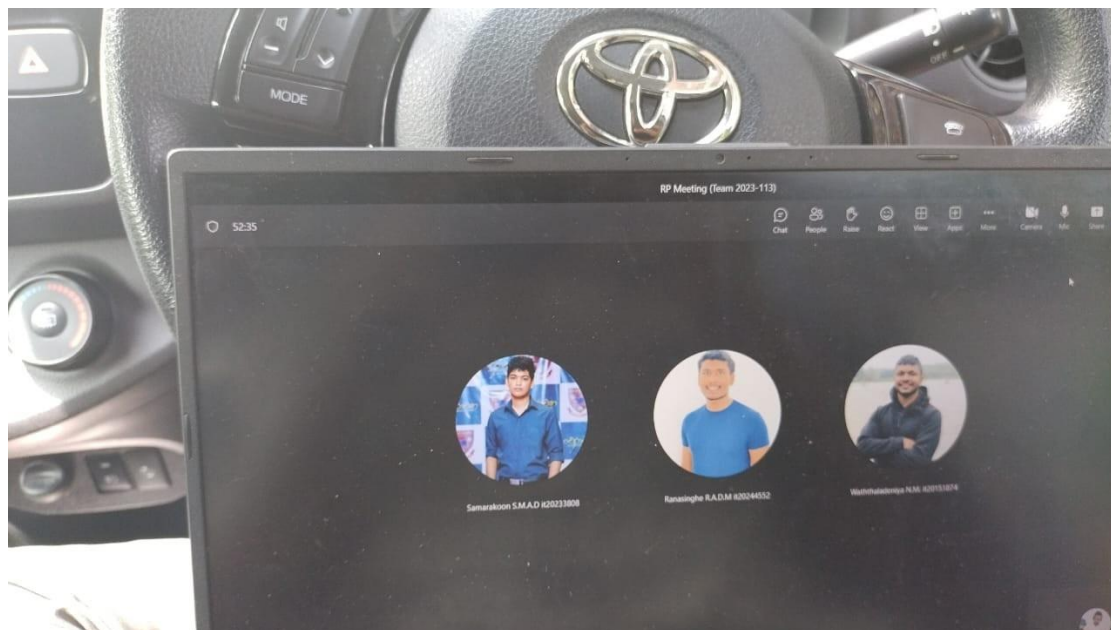


Figure 2 Teams call 2 with research Team

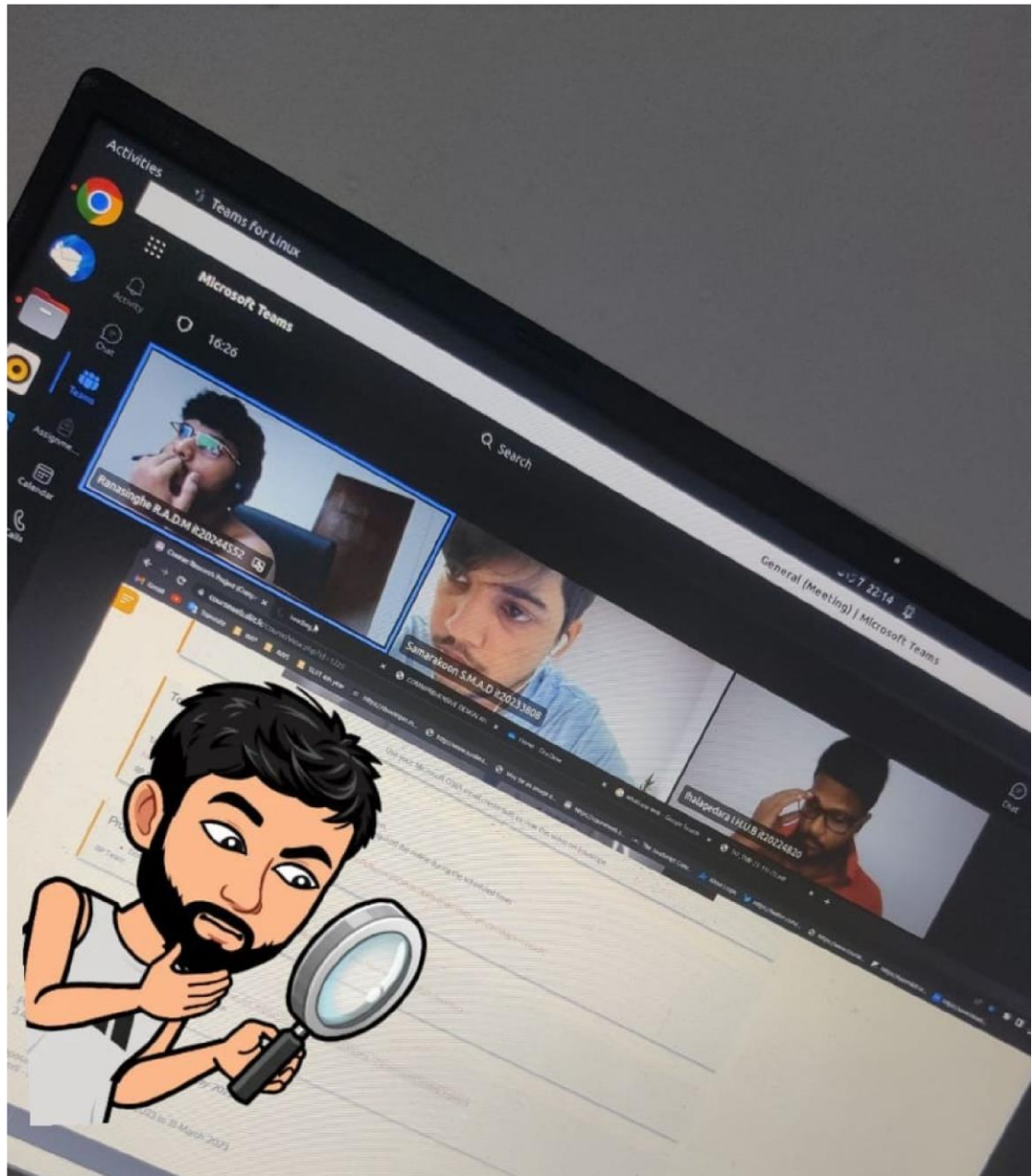


Figure 3 with research Team

1.2 Teams call with supervisor.

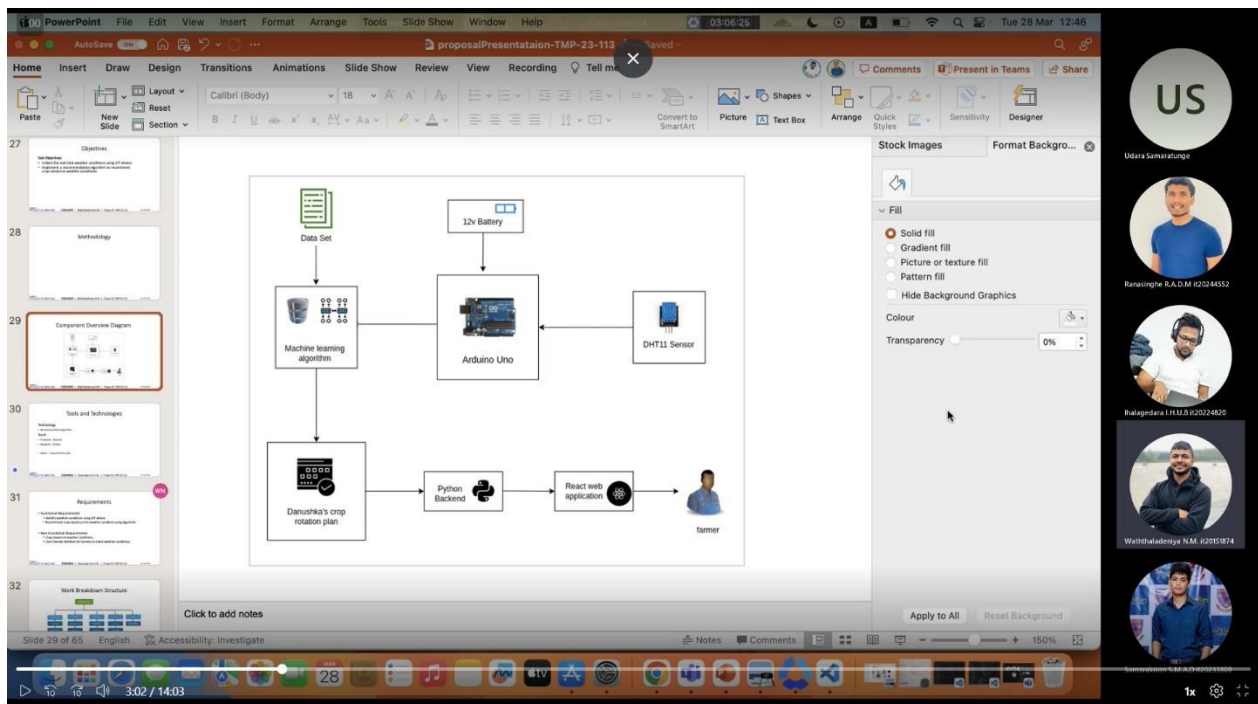


Figure 5 Teams call 1 with Supervisor

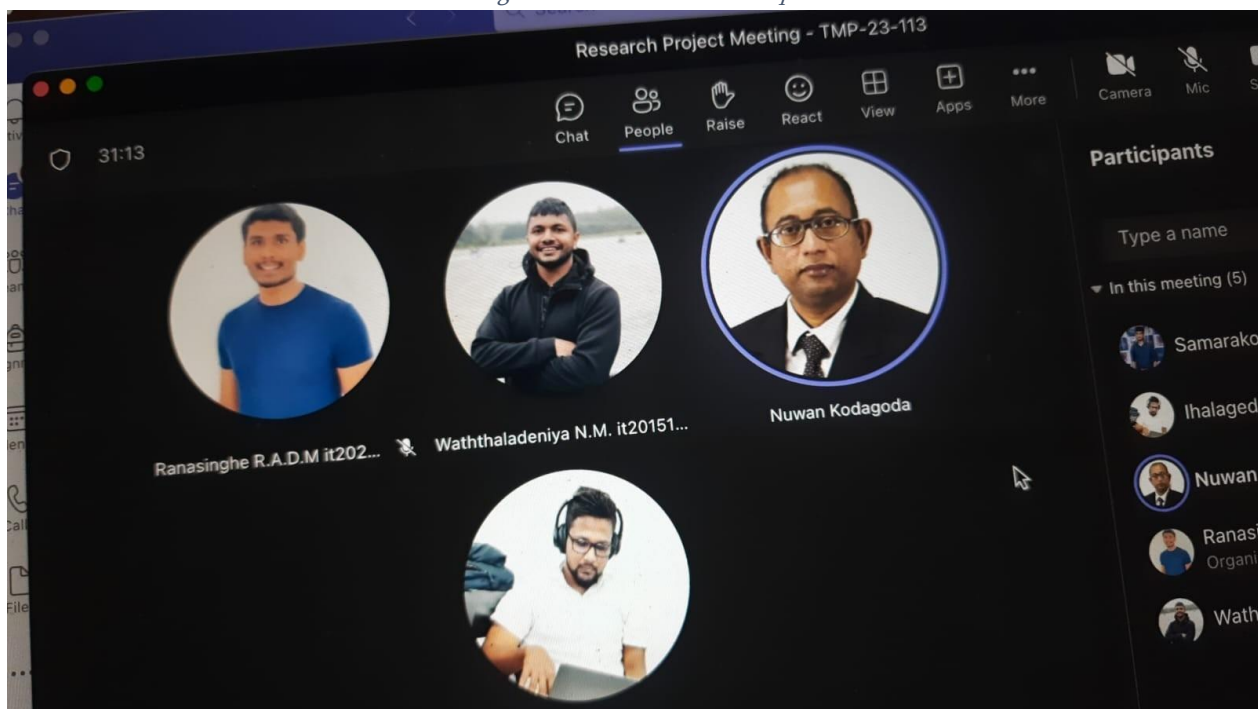
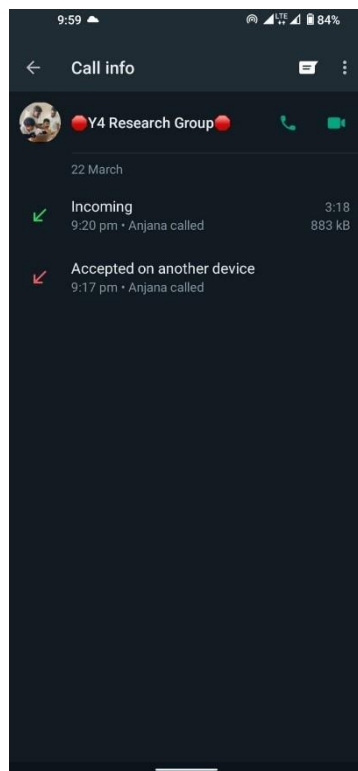
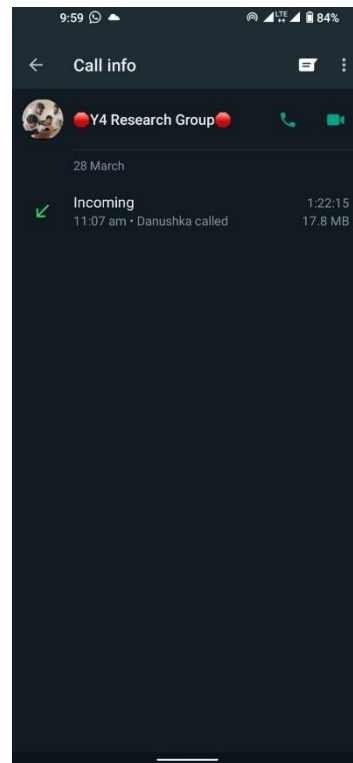
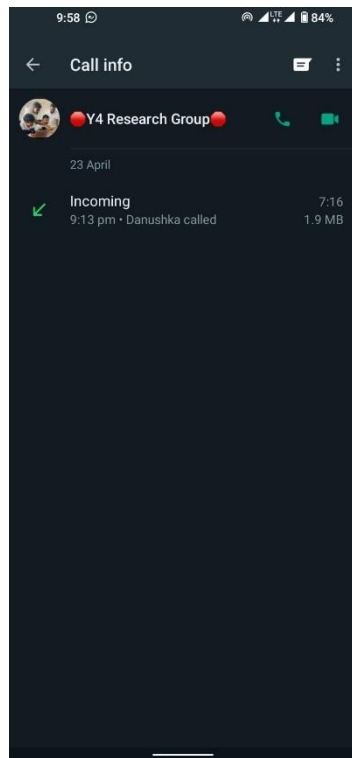


Figure 6 Teams call 2 with Supervisor

2. WhatsApp calls



3. Research Paper Publication

From: SETCMS <ismsit2023@set-science.com>
 Date: Sun, Oct 1, 2023 at 2:03 AM
 Subject: ISMSIT2023 - Acceptance Letter
 To: <it20244552@my.sliit.lk>

Dear Sir/Madam,

We are pleased to inform you that your paper has been ACCEPTED at ISMSIT2023.

The acceptance letter of your submission has been sent.

NOTE: At least one author is required to register for each paper. You can visit our website for registration details.

On behalf of the organization committee we would like to congratulate you.

Best Regards,

One attachment • Scanned by Gmail ⓘ



7th International Symposium on Multidisciplinary
 Studies and Innovative Technologies
 October 26-28, 2023, Ankara, Turkey (Hybrid)



Sep 30, 2023

INVITATION LETTER

Dear Danushka Ranasinghe,

To Whom It May Concern,

We are pleased to invite you to present your paper at "[International Symposium on Multidisciplinary Studies and Innovative Technologies](#)" which will take place in Ankara, Turkey, Oct 26, 2023 -Oct 28, 2023.

Scientific Committee of ISMSIT2023 summarized your paper details below.

Paper Title : Smart System to Optimize Organic Crop Rotation Using Precision Agriculture Data

Paper ID : 79

Paper Authors : Danushka Ranasinghe

For indexing, papers to be published in IEEE Xplore will be submitted to various international databases such as SCOPUS, Inspec, and Google Scholar.

ISMSIT 2023 is supported by Tokat Gaziosmanpasa University and [IEEE Turkey Section](#).

For the IEEE Xplore publishing option, you must complete the [Camera-Ready Submission process](#) by October 15, 2023.

Thank you in advance for your contribution toward to success of ISMSIT2023. We look forward to your participation to [ISMSIT2023](#) in Ankara, Turkey.

Best Regards,

A handwritten signature in blue ink, appearing to read 'Ebubekir Yasar'.

Ebubekir Yasar
 On behalf of the organizing committee
 Symposium Chair

Zoom Meeting

You are viewing Danushka Malinga ...'s screen

Vesselin Cho...
Vesselin Chobanov

Anjana Samarakoon

Danushka Malinga Rana...

Iklima ermis I...
Iklima ermis Ismail

ISMSIT 2023

Anita Hidayati

Recording

ISMSIT 2023

7th International Symposium on Multidisciplinary Studies and Innovative Technologies
October 26-28, 2023, Radisson Blu Hotel, Ankara, Turkey (Hybrid)

IEEE
Turkey Section

CONCLUSION

This research introduced a Smart System for Optimized Organic Crop Rotation, leveraging IoT, ML, and cloud computing to tackle challenges in organic farming. Also, a Real-time soil health analytics component, climate-sensitive data processing component and a cloud-based pest and disease identification model acts as a bridge between conventional and modern farming approaches, propelling the agricultural sector towards sustainability.

Unmute Start Video Participants Chat Share Screen Record Raise Hand Apps Whiteboards Leave

Zoom Meeting

Vesselin Cho...
Vesselin Chobanov

Anjana Samarakoon

Danushka Malinga Rana...

Iklima ermis I...
Iklima ermis Ismail

ISMSIT 2023

Anita Hidayati

Recording

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IEEE
Turkey Section

Thank You

Authors - Danushka Ranasinghe, Anjana Samarakoon, Upendra Ihalagedara, Madusanka Watththaladeniya, Udara Samaraturunge, Nuwan Kodagoda

SLIT UNI
THE KNOWLEDGE UNIVERSITY

Smart System to Optimize Organic Crop Rotation Using Precision Agriculture Data(Paper ID - 79)

4. Emails and planned Teams Events

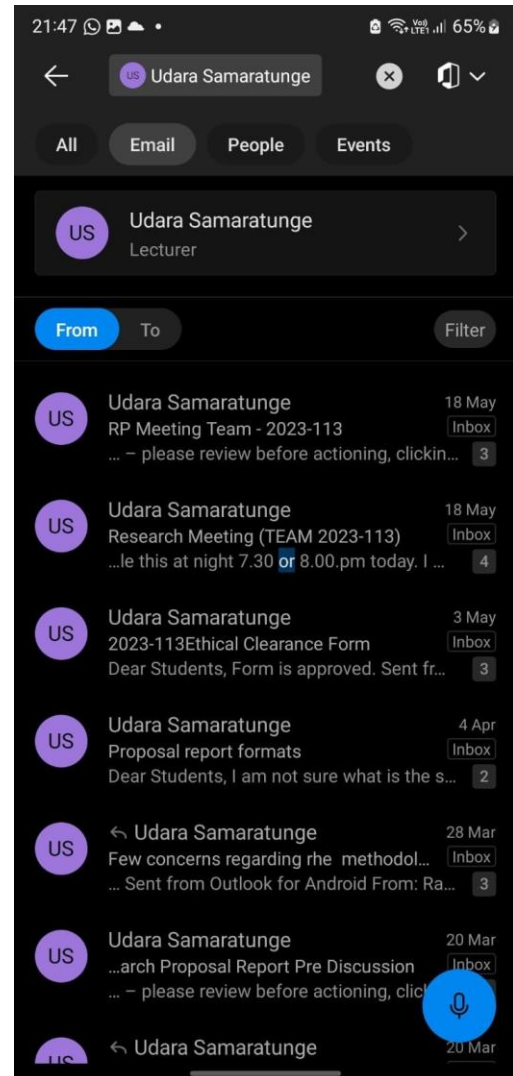
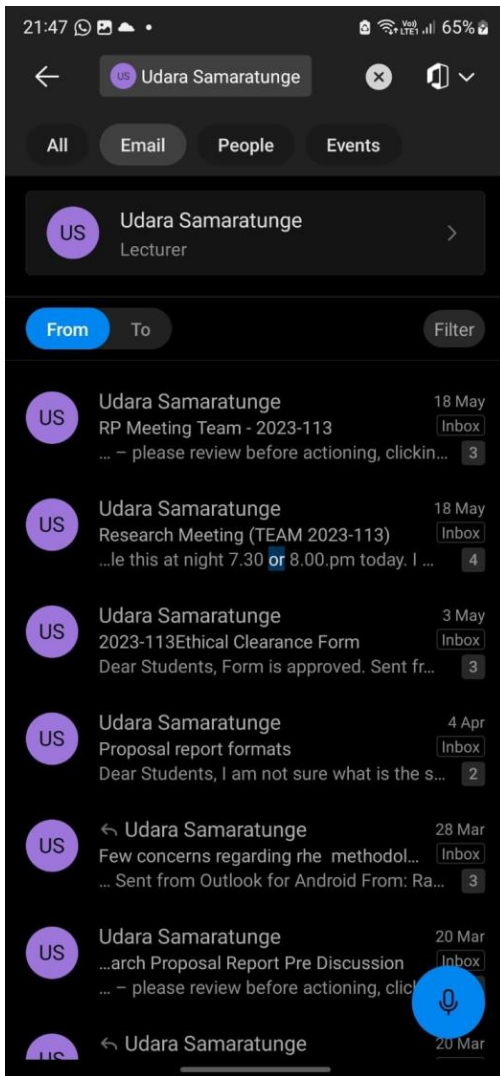


Figure 9 Email and Teams event

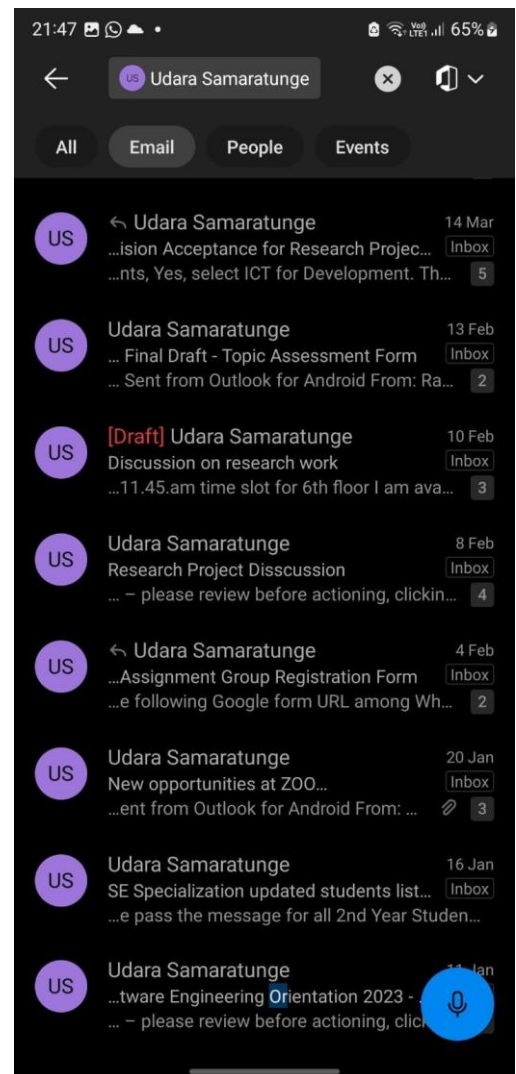
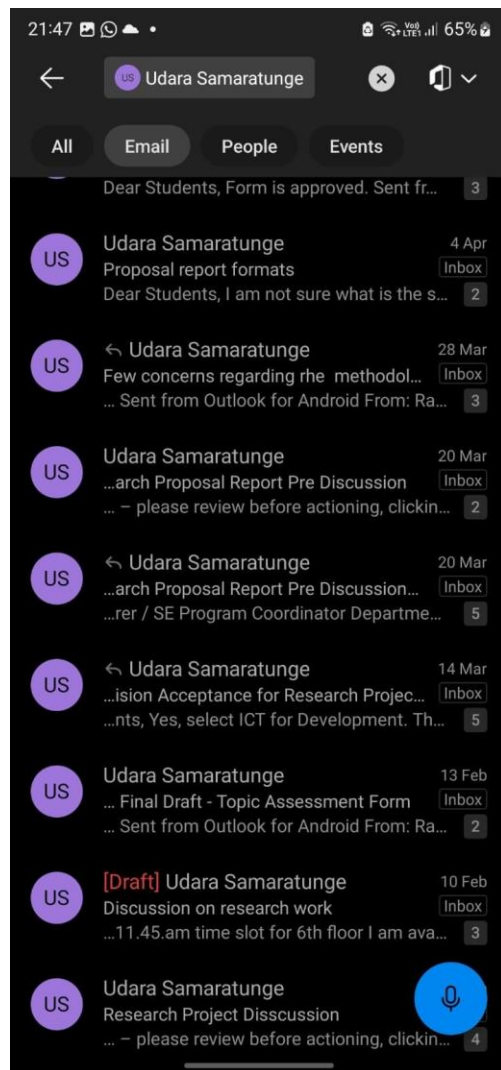


Figure 9 Email and Teams event

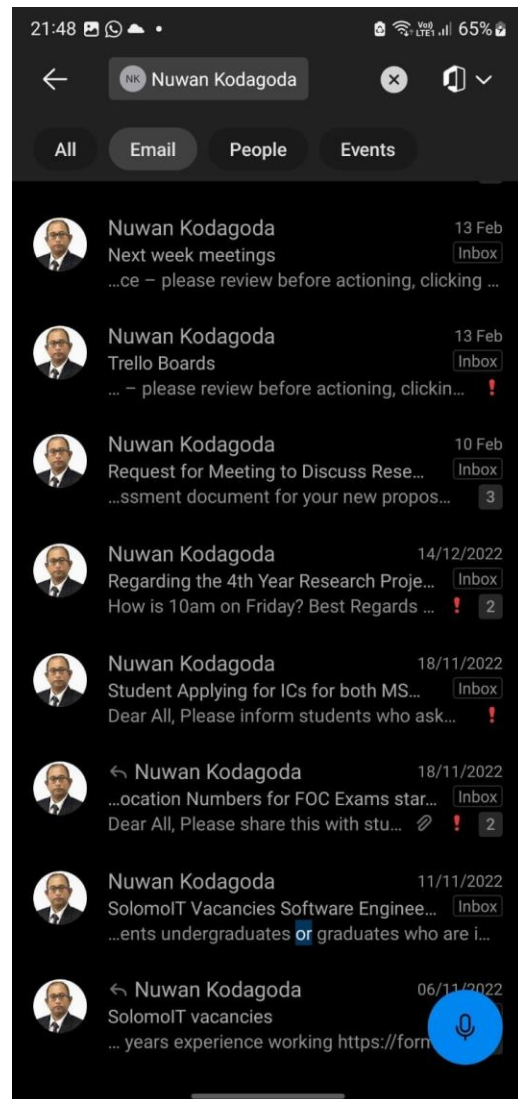
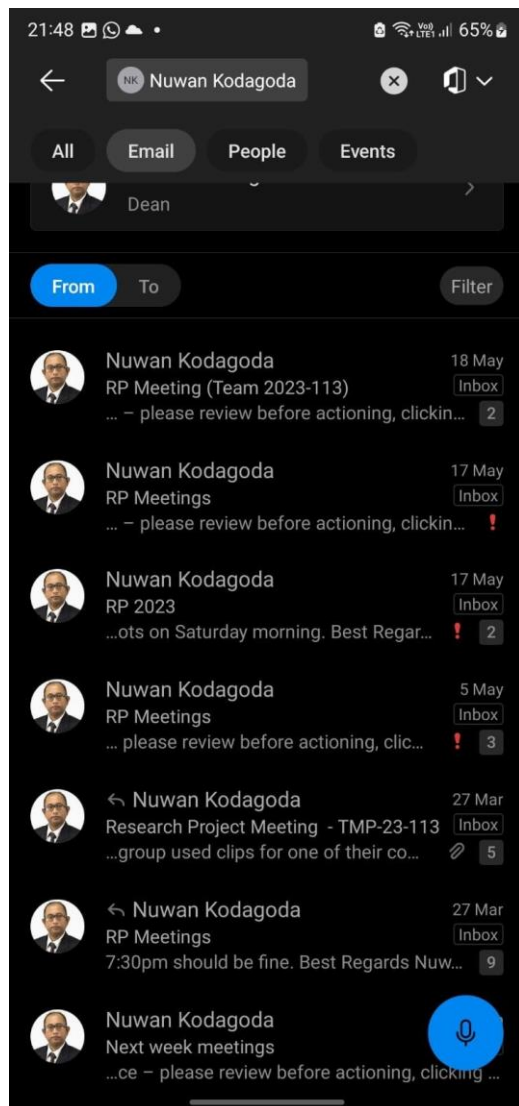


Figure 9 Email and Teams event

5. Trello Planner

5.1 Planner Board

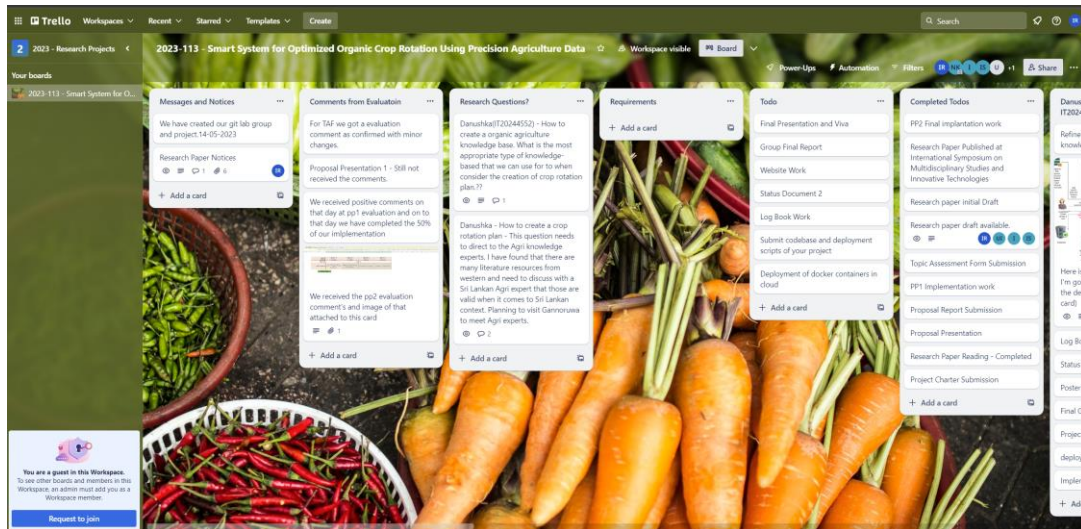


Figure 10 Planner board part 1

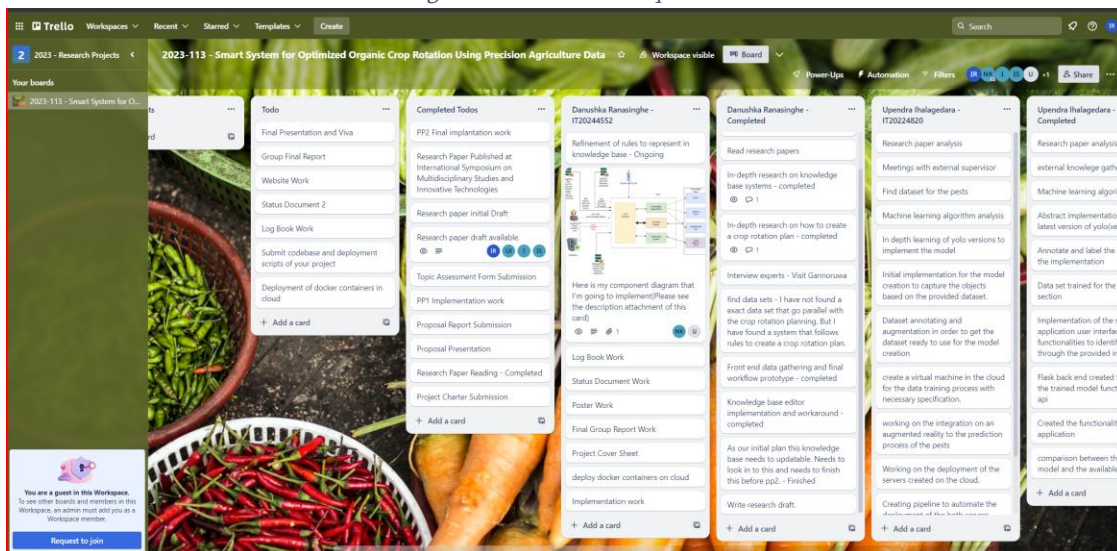


Figure 11 Planner Board part 2

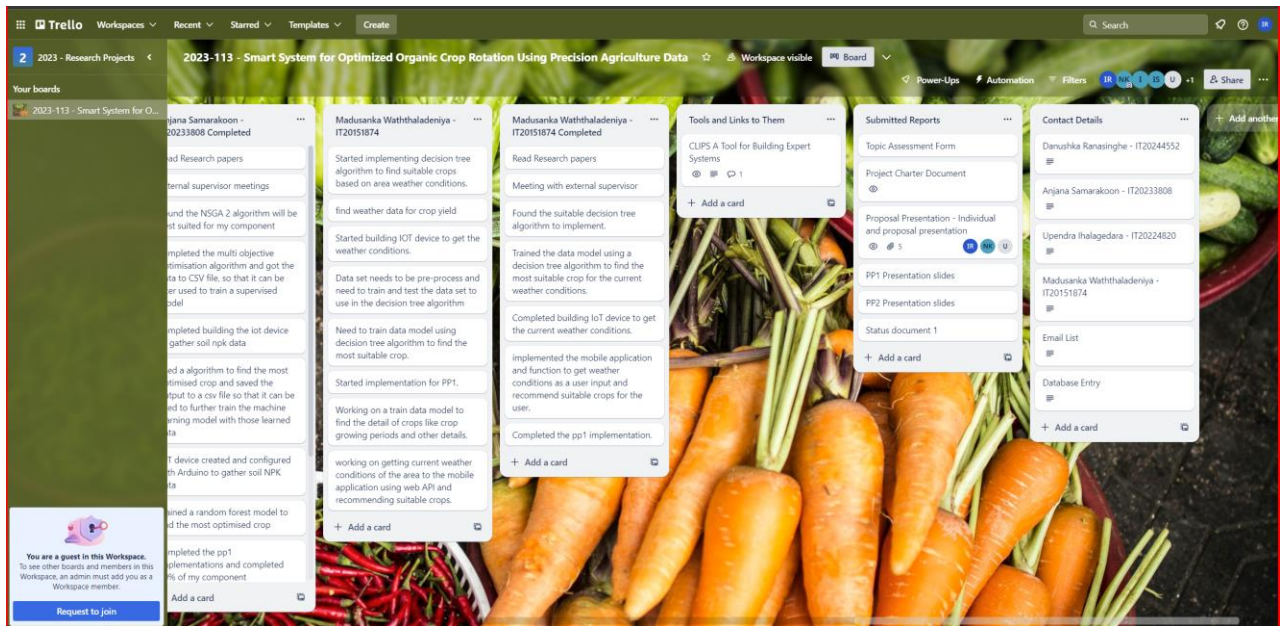


Figure 11 Planner Board part2

5.2 Teams planner Schedule

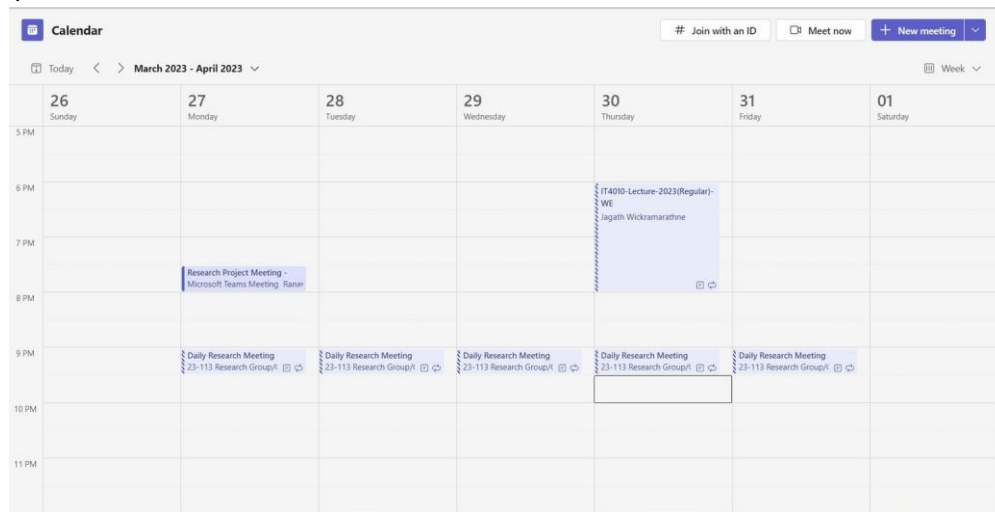


Figure 14 Teams Planner Schedule

5.3 Teams Planner Charts

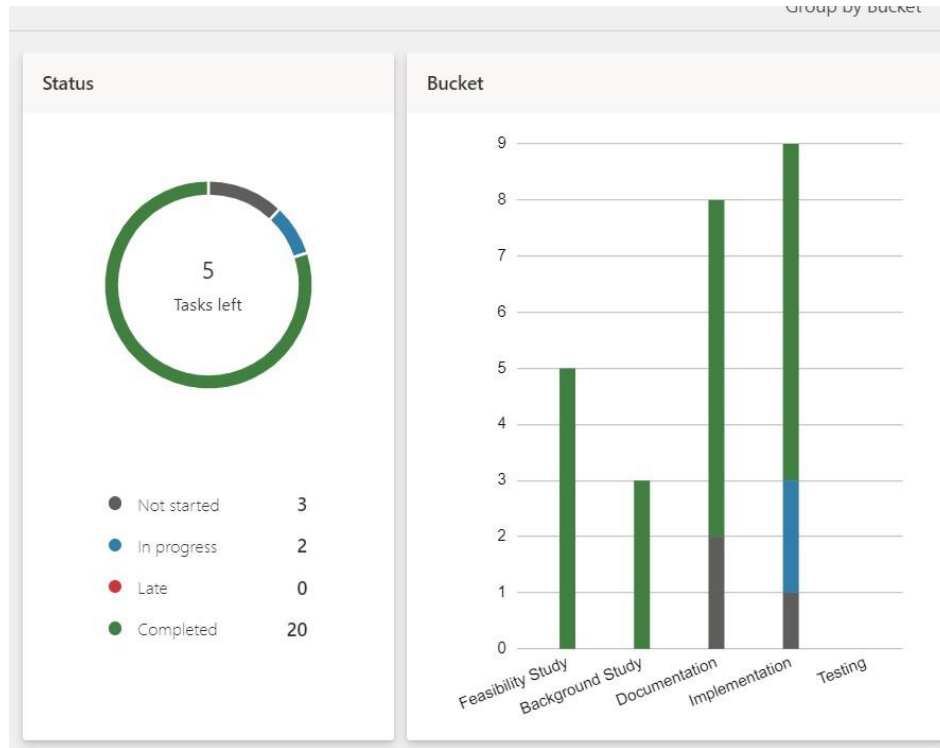
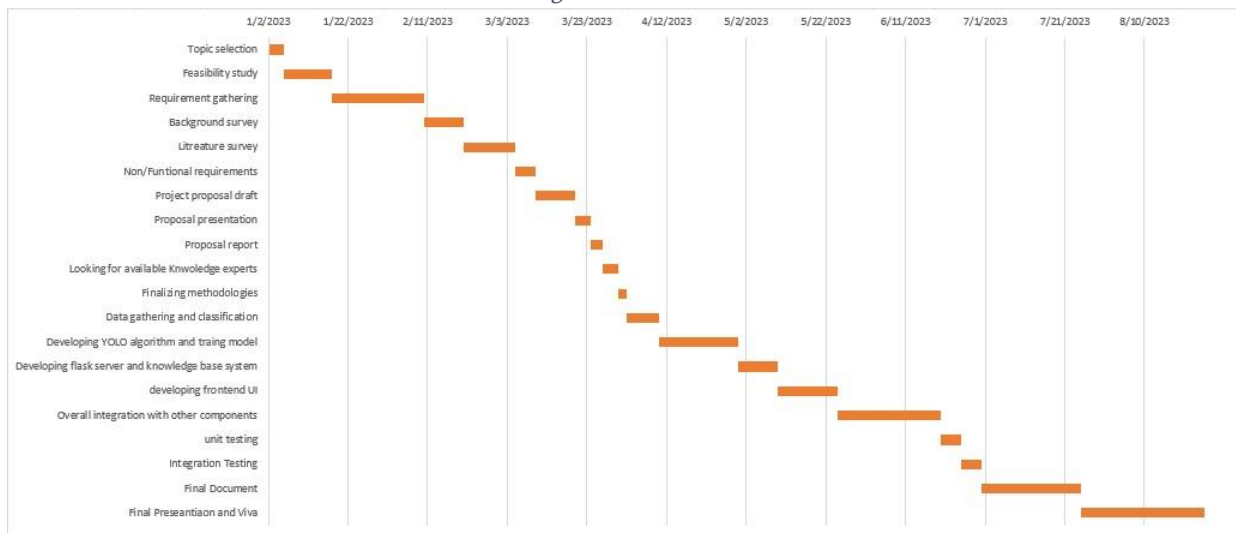


Figure 15 Teams Planner chart

6. Gantt Chart

Figure 16 Gantt chart



7. Work Breakdown Structure

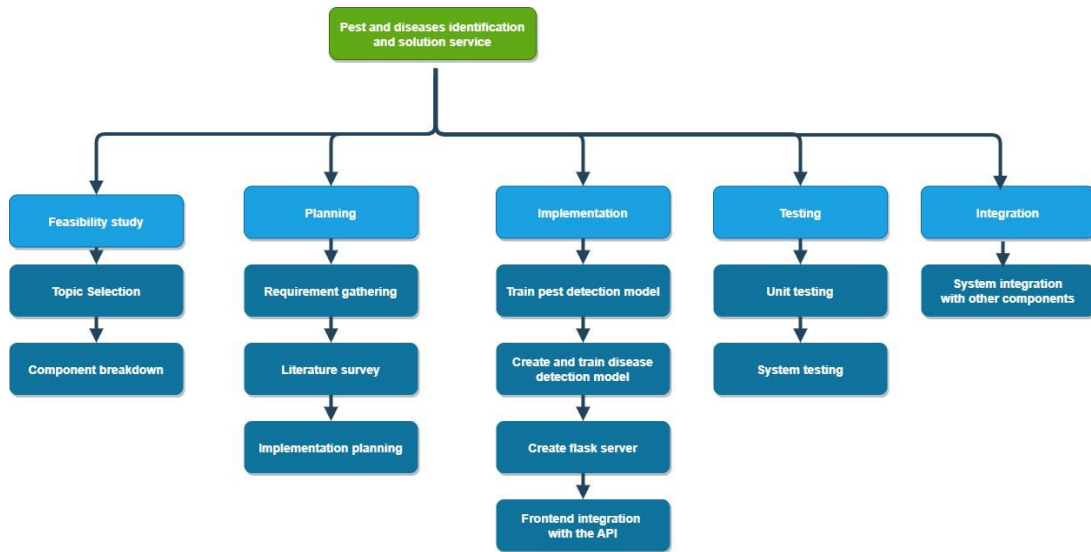


Figure 17 work breakdown structure

8. Gitlab Commits

The screenshot displays the GitLab interface for the repository '2023-113'. The left sidebar shows navigation options like Project overview, Repository, Files, Commits, Branches, Tags, Contributors, Graph, Compare, Issues, Merge Requests, CI / CD, Analytics, Wiki, Snippets, and Members. The main content area shows the 'master' branch with a commit history table and the 'README.md' file content.

Name	Last commit	Last update
crop rotation planner changes	danushka9999 authored 23 hours ago	a2f7ab56
■ Crop Rotation Planner-IT2024452	component diagram added	5 months ago
■ Pest Identifier and Protection Suggestor-IT20224820	Update README.md	5 months ago
■ Soil Analyzer and Optimized Crop Finder - IT20233808	crop rotation planner changes	23 hours ago
■ Weather Analyzer and Crop Recommender-IT20151874	weather data input page	5 months ago
📁 _DS_Store	home screen added	5 months ago
📄 README.md	Update README.md	5 months ago

README.md

2023-113

"OrganicFarm Support" – Organic Farming Software Solution for Farmers Who Follows Precision Agriculture

Main Objective

The main objective of this system is to provide stakeholders with a crop rotation plan by analyzing soil, climate, and pests. It also furnishes them with relevant information regarding soil, climate, and pests to safeguard and enhance the sustainability of their farms.

IT20244552 -Ranasinghe R.A.D.M

Individual Research Questions :

1.How to create a crop rotation plan according to precision agriculture data? 2.What are the other parameters that need to consider when creating the crop rotation plan? 3.How to create the organic agriculture knowledge base. What is the most appropriate type of knowledge-based type that we can use for this issue?

Individual Research Objective :

Figure 18 Gitlab master branch

8.1 Commits to the branch

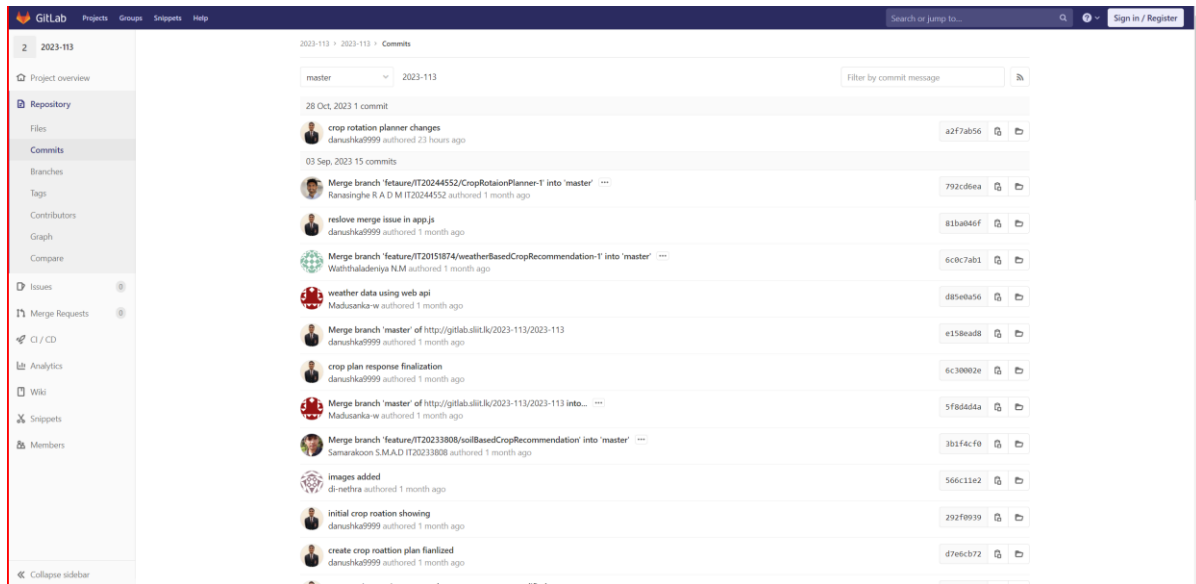


Figure 19 Gitlab IT20233808 branch commit part 1

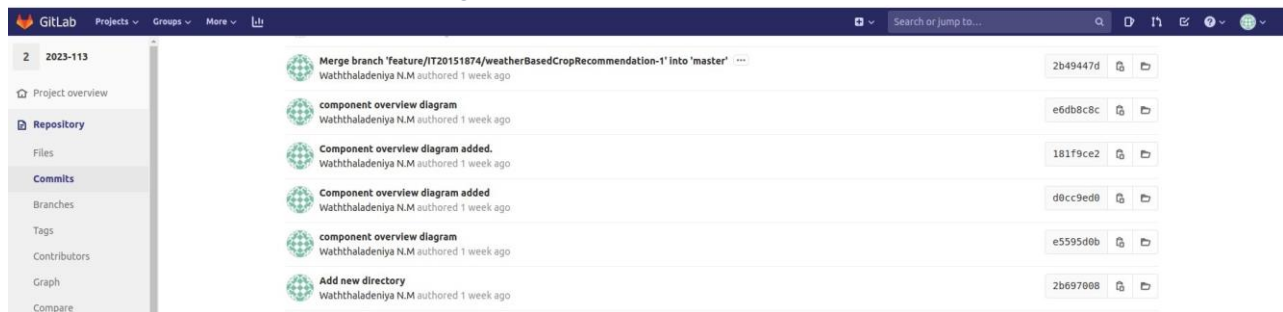
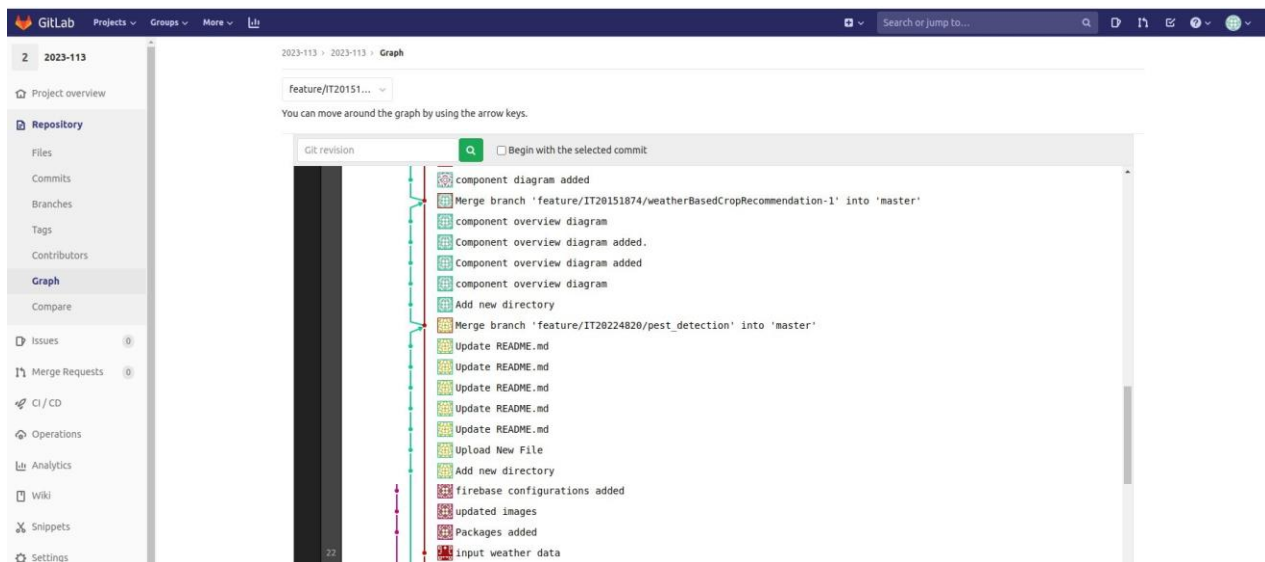
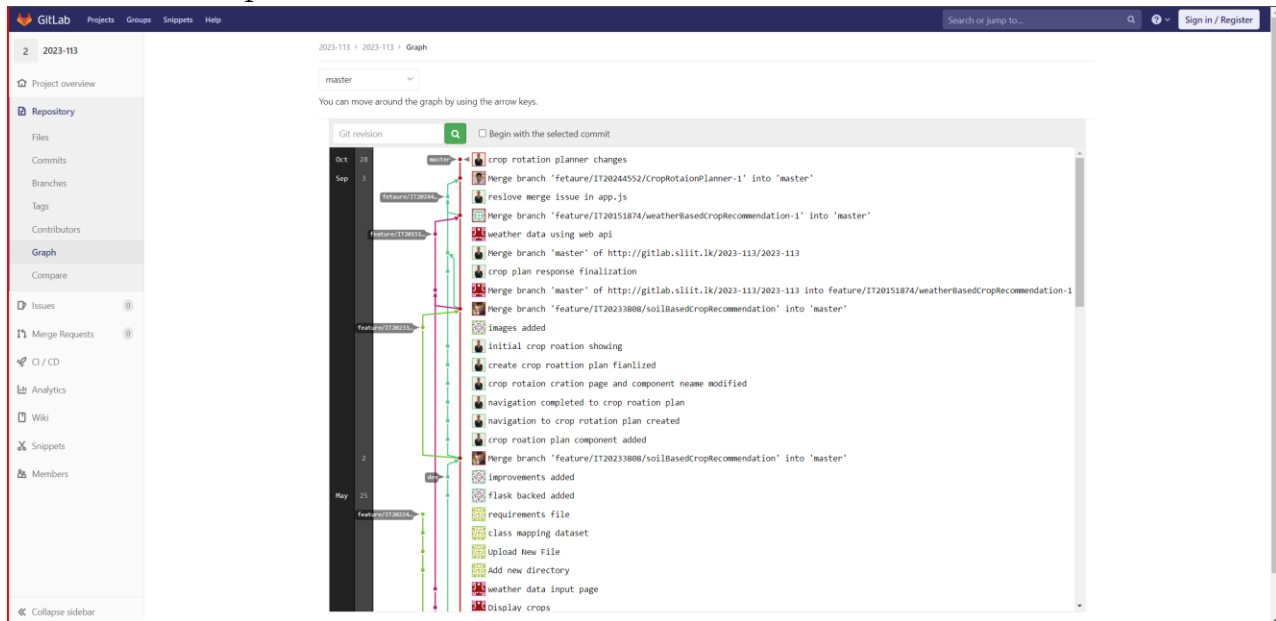


Figure 20 Gitlab IT20233808 branch commit part 2

8.2 GitLab Graph



8.3 Gitlab Contributors

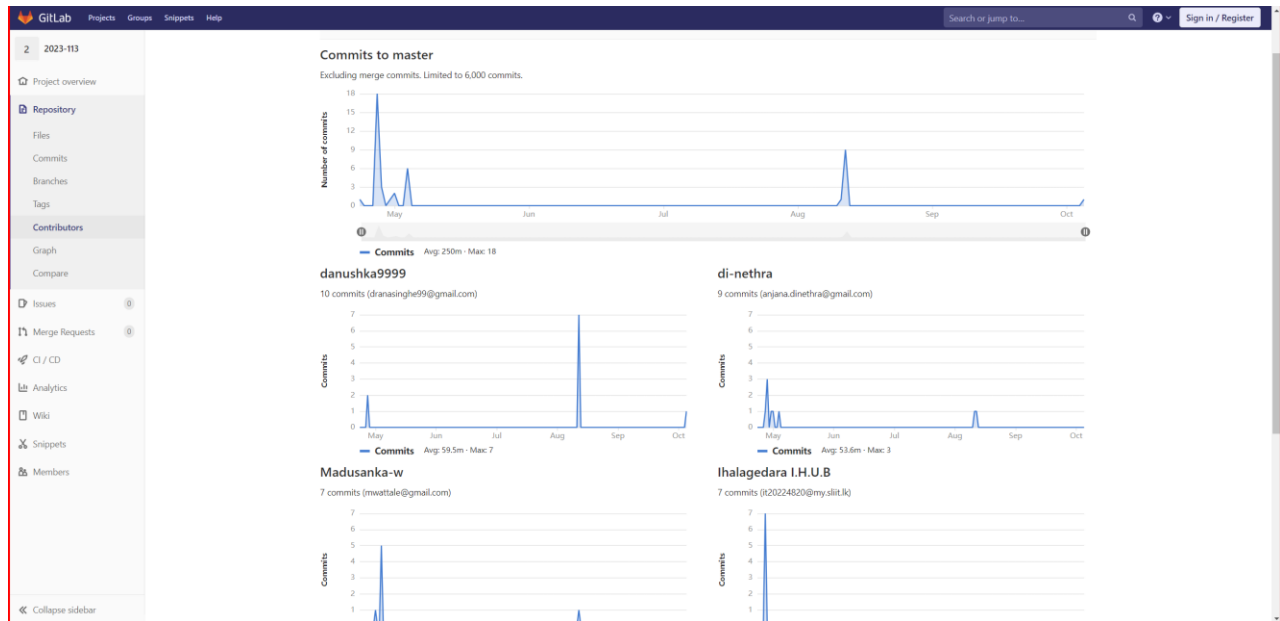


Figure 24 Contributor commit representation