

**ENHANCING CONVERSATIONAL AI MODEL
PERFORMANCE AND EXPLAINABILITY FOR
SINHALA-ENGLISH BILINGUAL SPEAKERS**

2022-056

Project Status Document - I

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B.Sc. (Hons) Degree in Information Technology Specialising in
Software Engineering

Department of Information Technology

Sri Lanka Institute of Information Technology
Sri Lanka

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DECLARATION, COPYRIGHT STATEMENT

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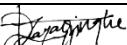
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1. MICROSOFT TEAMS SCREENSHOT

1.1 Calls with the team

The following screenshots include all the calls that were taken via the Microsoft Teams channel, created for the Research project team.

Team Meetings

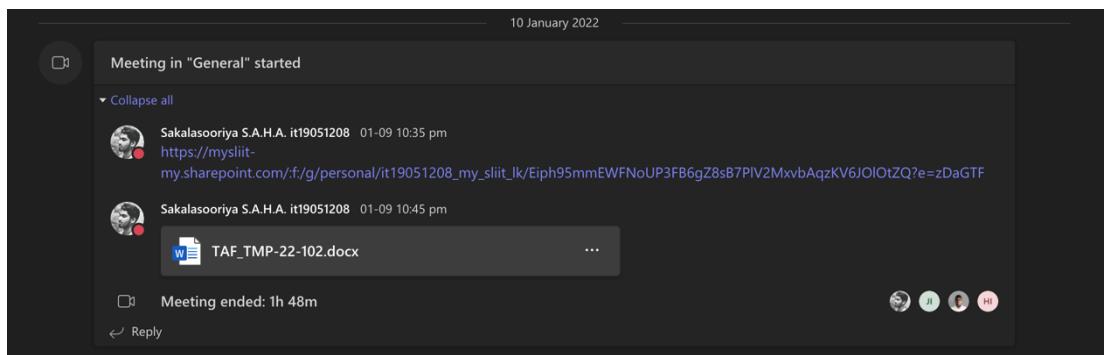


Figure 1.1.1. Topic assessment form preparation discussion meeting

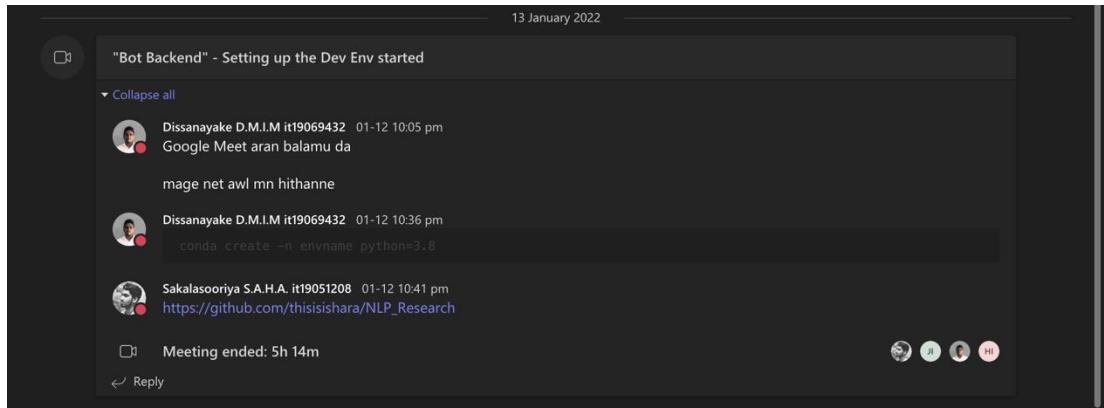


Figure 1.1.2. Chatbot backend design planning meeting

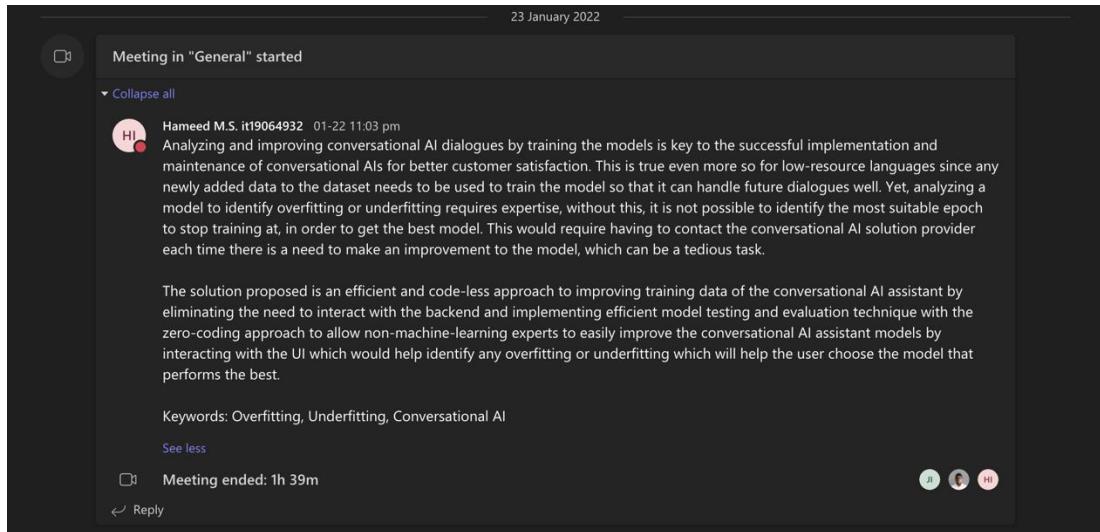


Figure 1.1.3. Charter document preparation team discussion - I

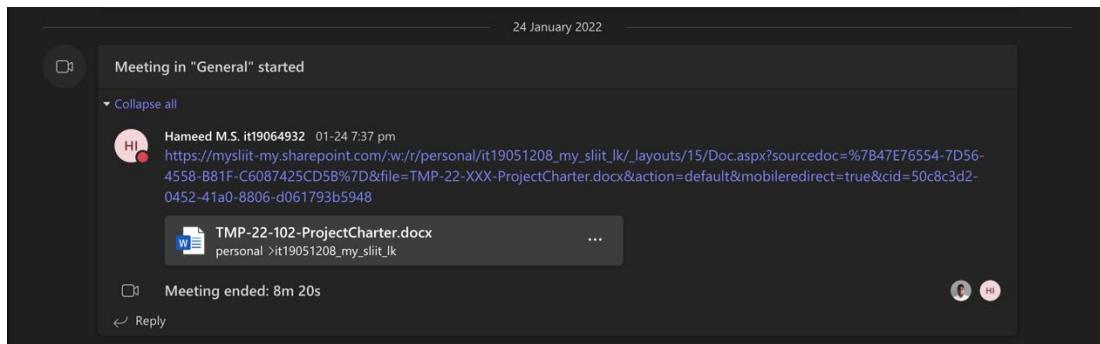


Figure 1.1.4. Charter document preparation team discussion - II

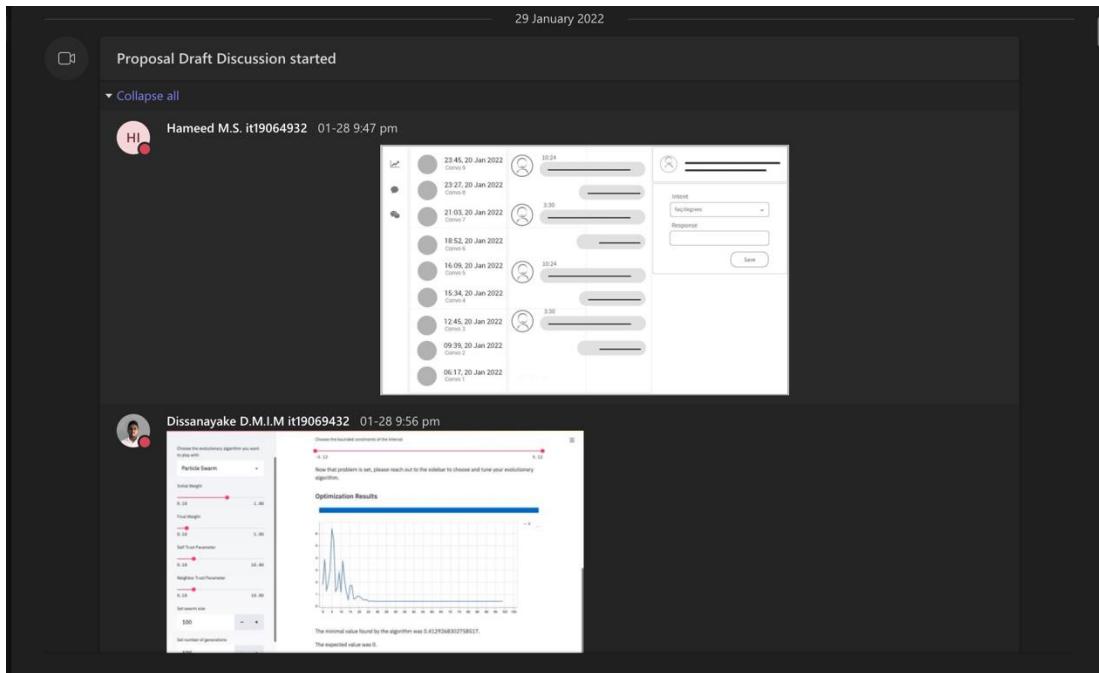


Figure 1.1.5. Research proposal draft preparation discussion meeting

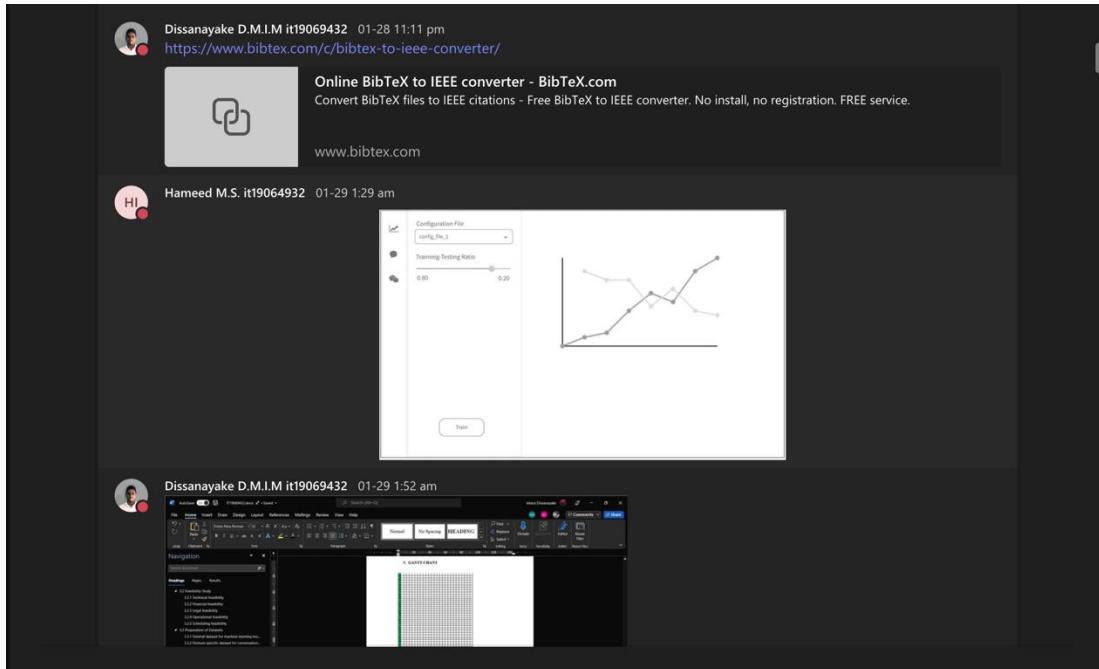


Figure 1.1.6. Files shared during the project proposal draft meeting - I

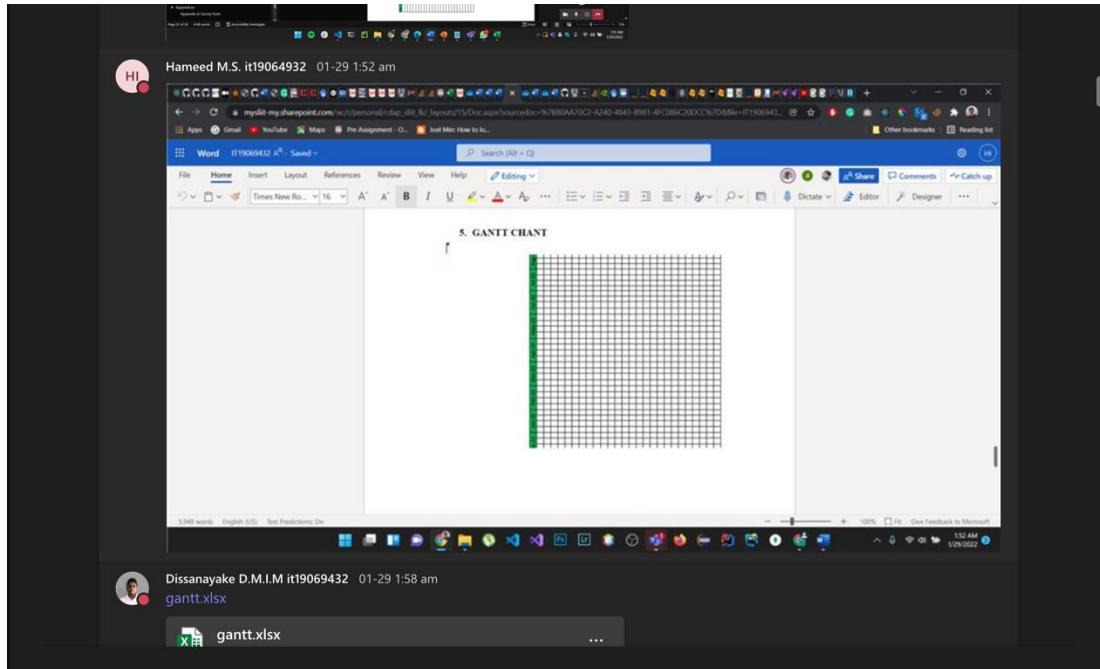


Figure 1.1.7. Gantt chart designed during the proposal draft discussion meeting - I

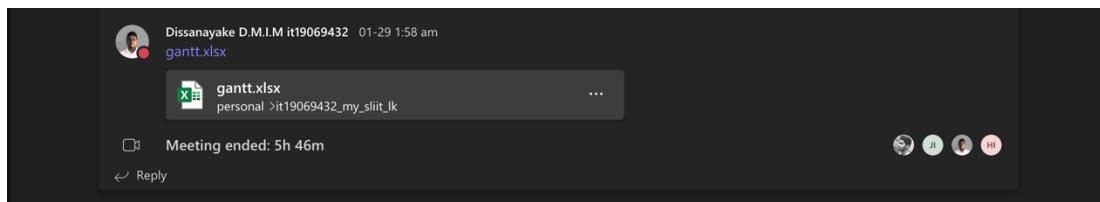


Figure 1.1.8. Gantt chart designed during the proposal draft discussion meeting - II

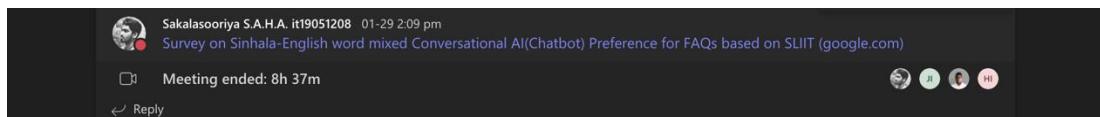


Figure 1.1.9. Survey planning and designing meeting

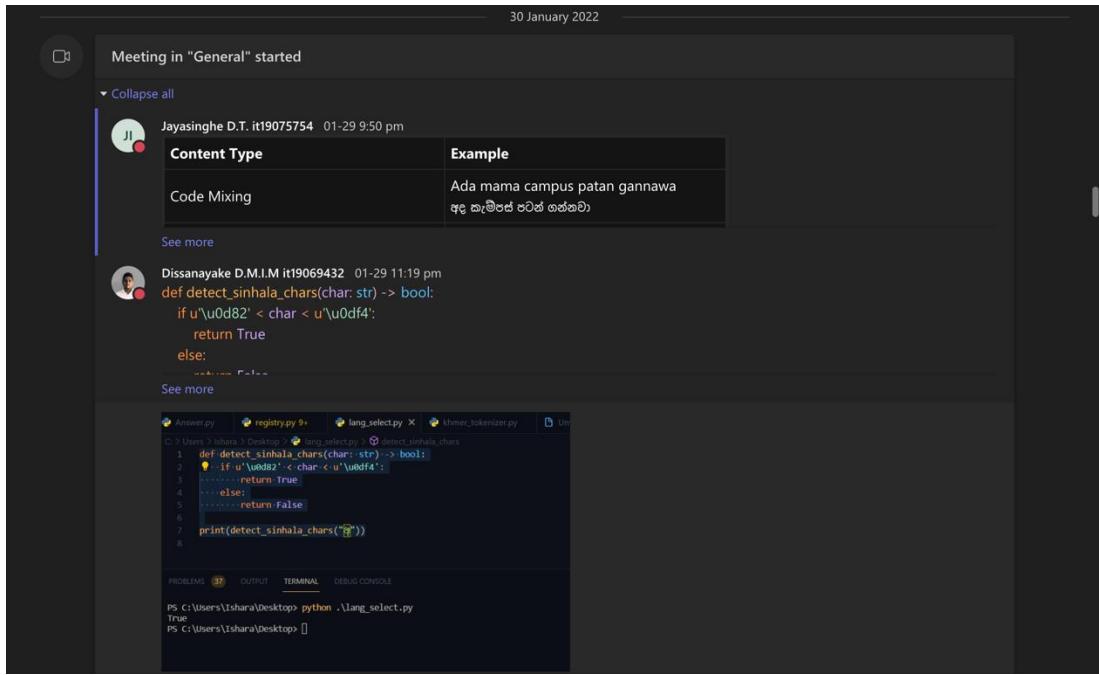


Figure 1.1.10. Files shared during the project proposal draft meeting - II

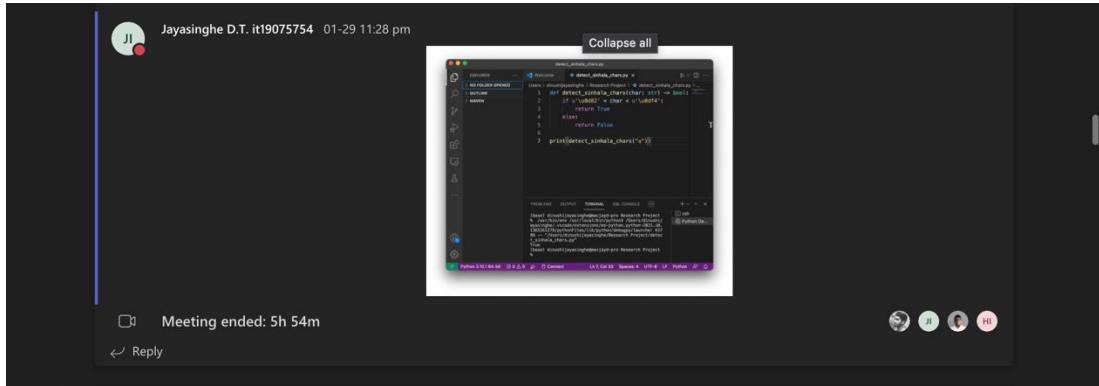


Figure 1.1.11. Files shared during the project proposal draft meeting - III

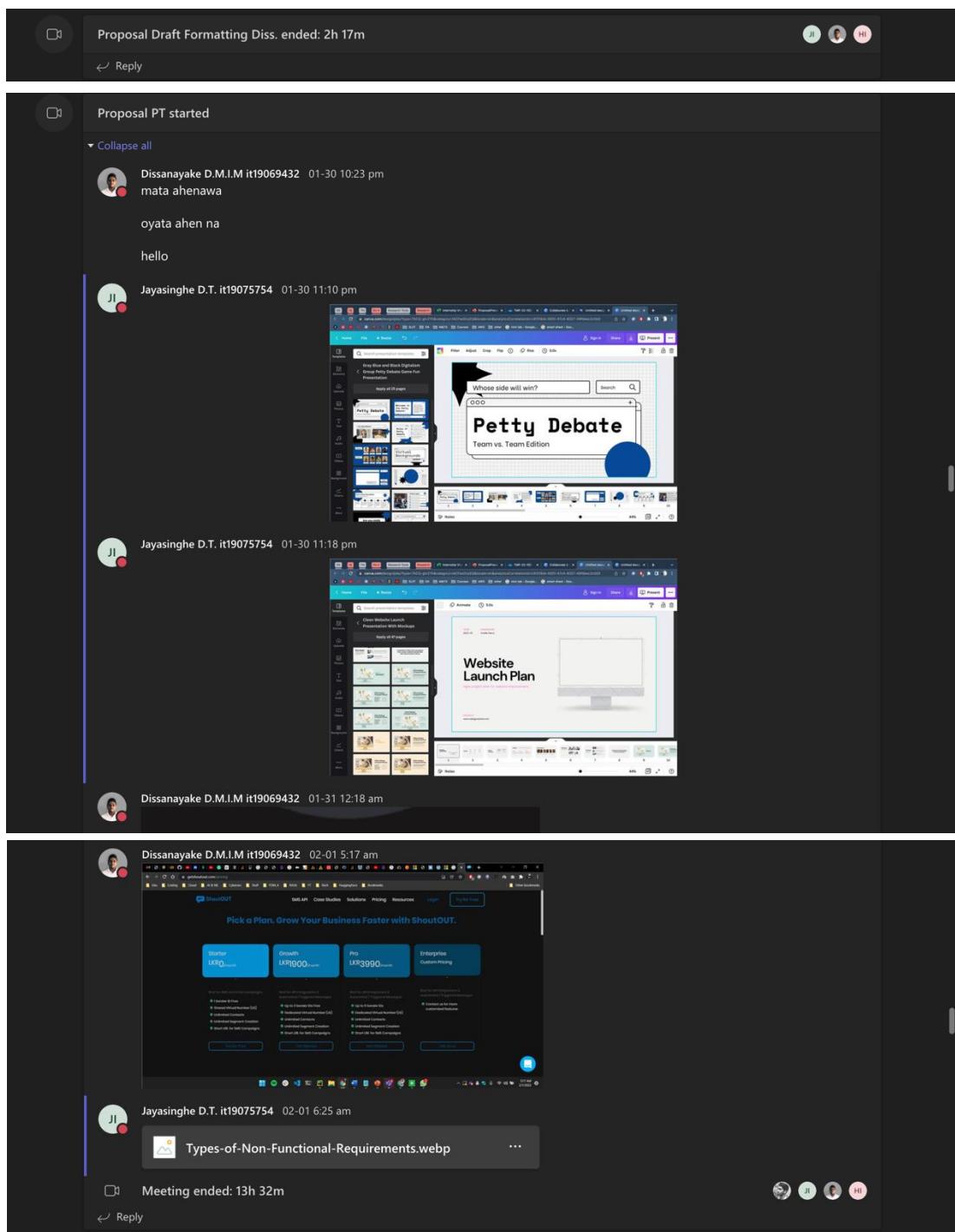


Figure 1.1.12. Ideas shared during proposal presentation planning discussion - I

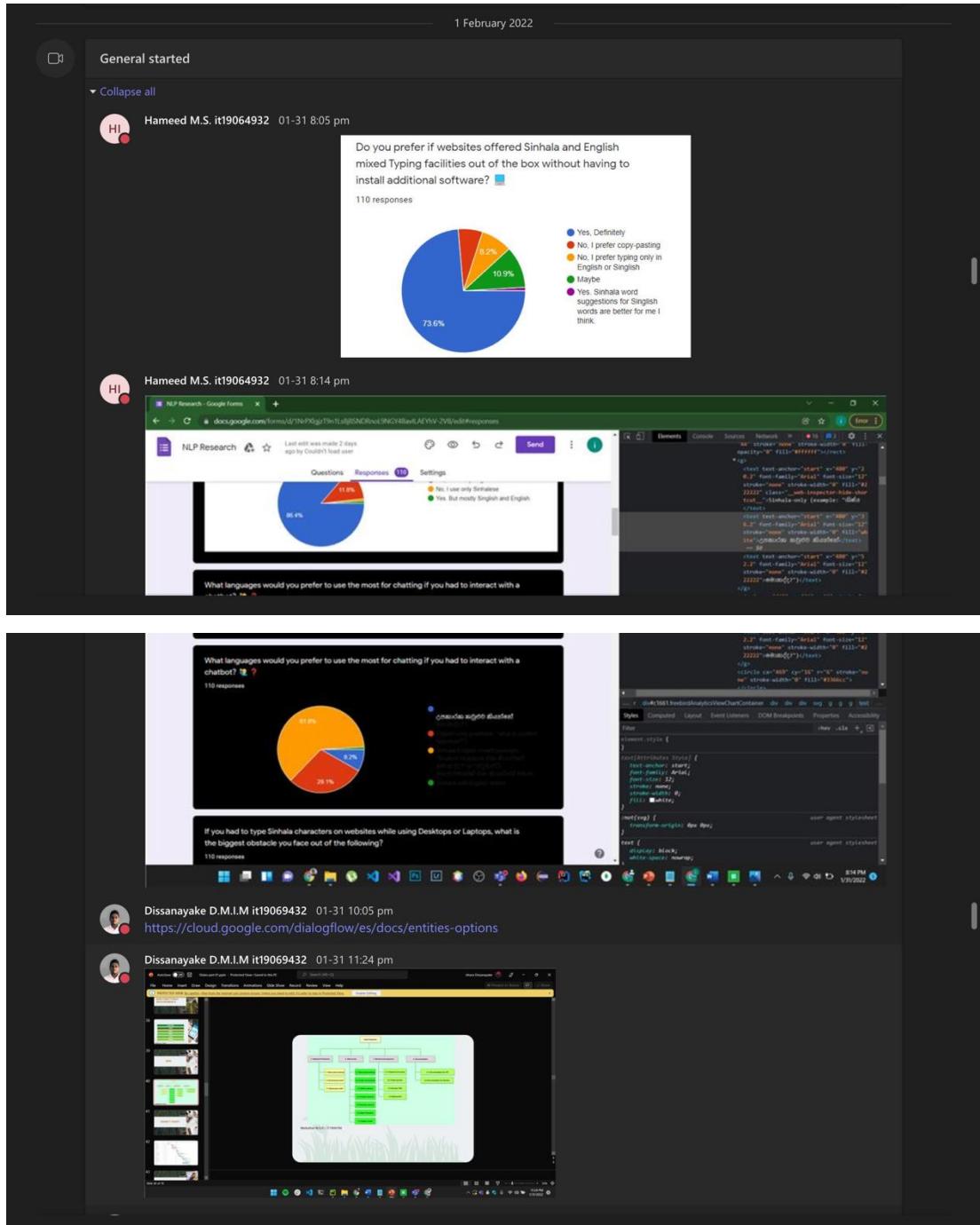


Figure 1.1.13. Ideas shared during proposal presentation planning discussion - II

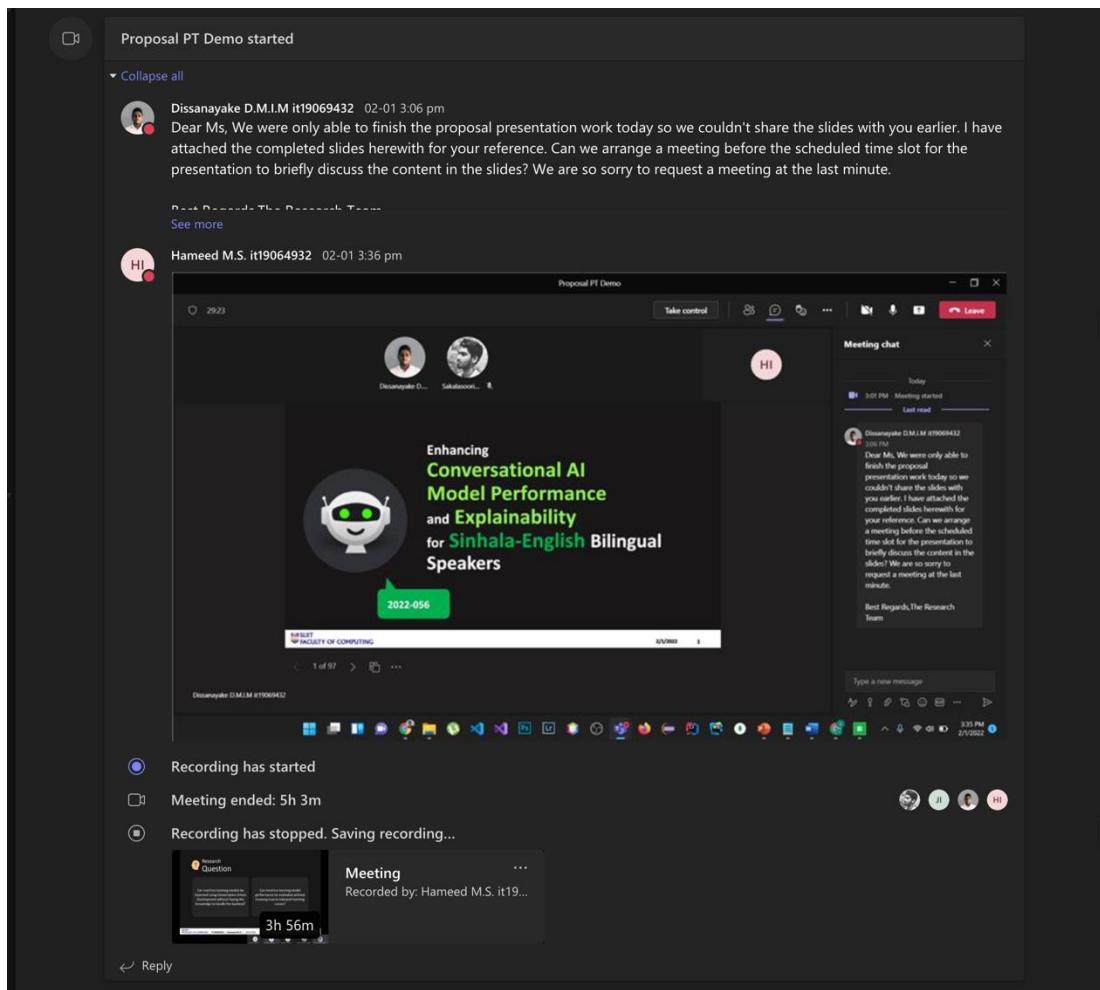


Figure 1.1.14. Proposal presentation demo meeting

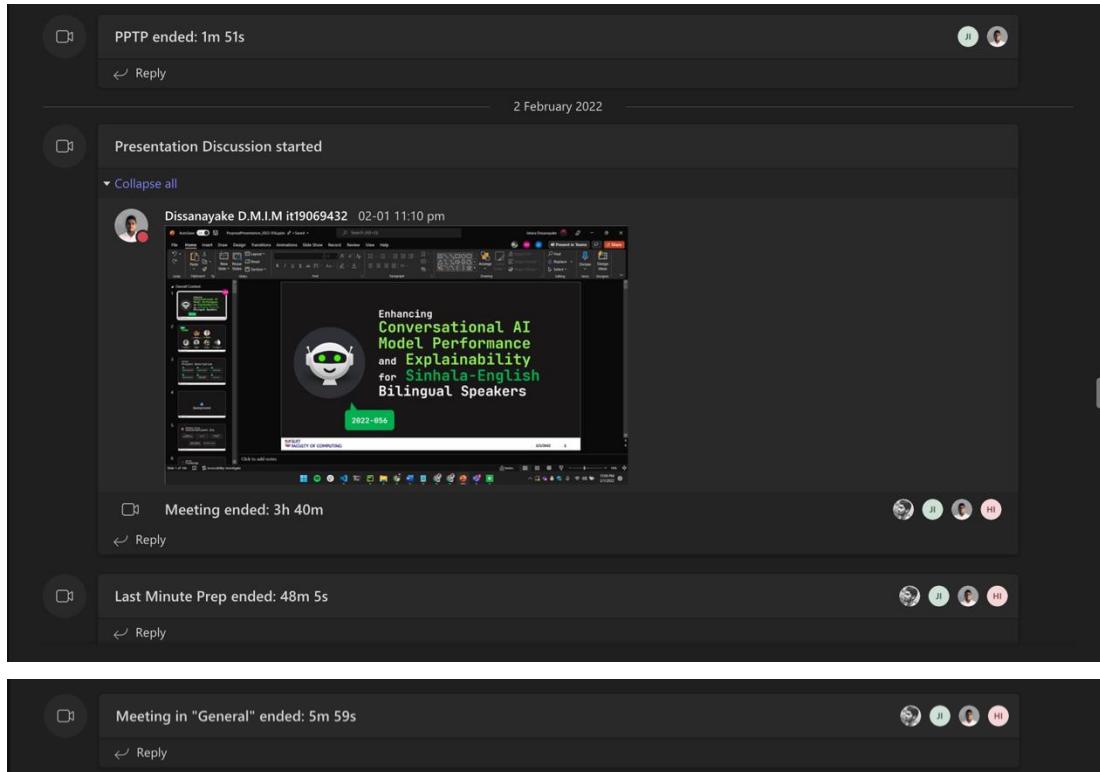


Figure 1.1.15. Proposal presentation last-minute preparation meetings

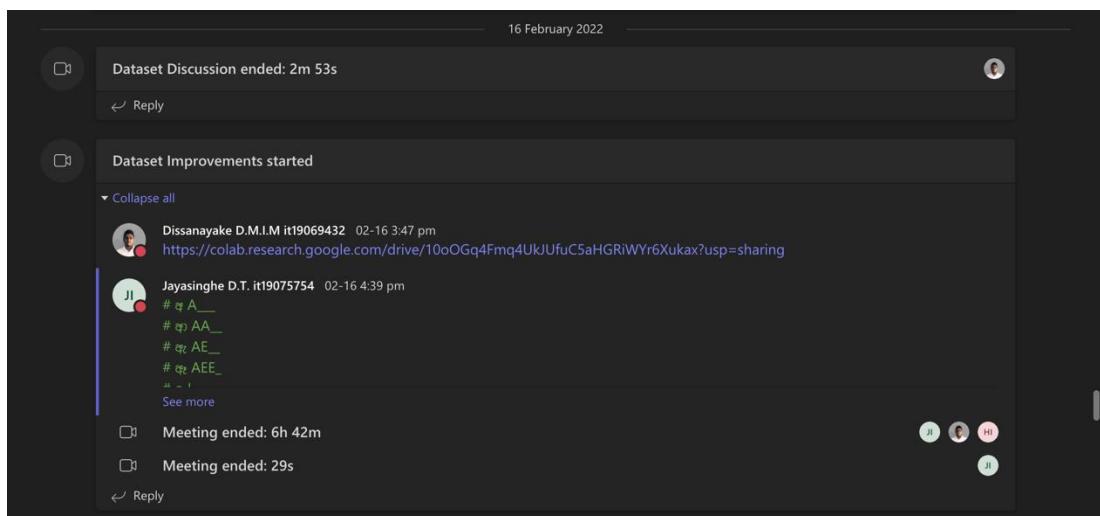


Figure 1.1.16. Initial dataset preparation planning discussion meeting

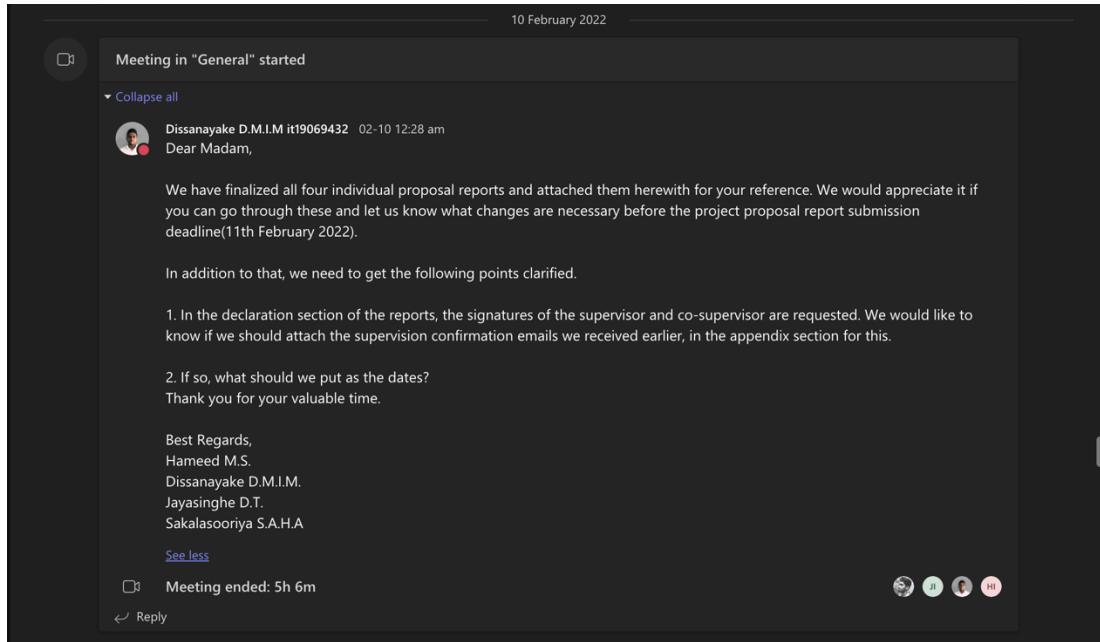


Figure 1.1.17. Proposal draft submission finalization meeting

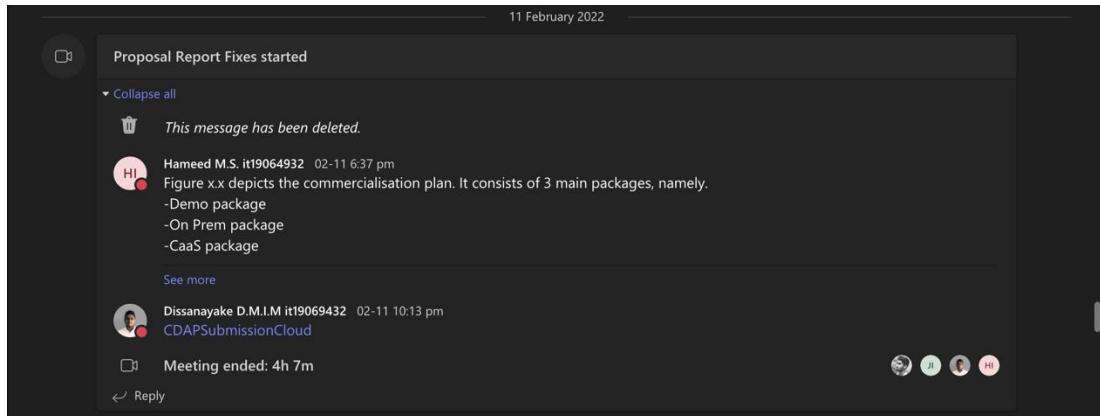


Figure 1.1.18. Proposal draft review and proofreading discussion

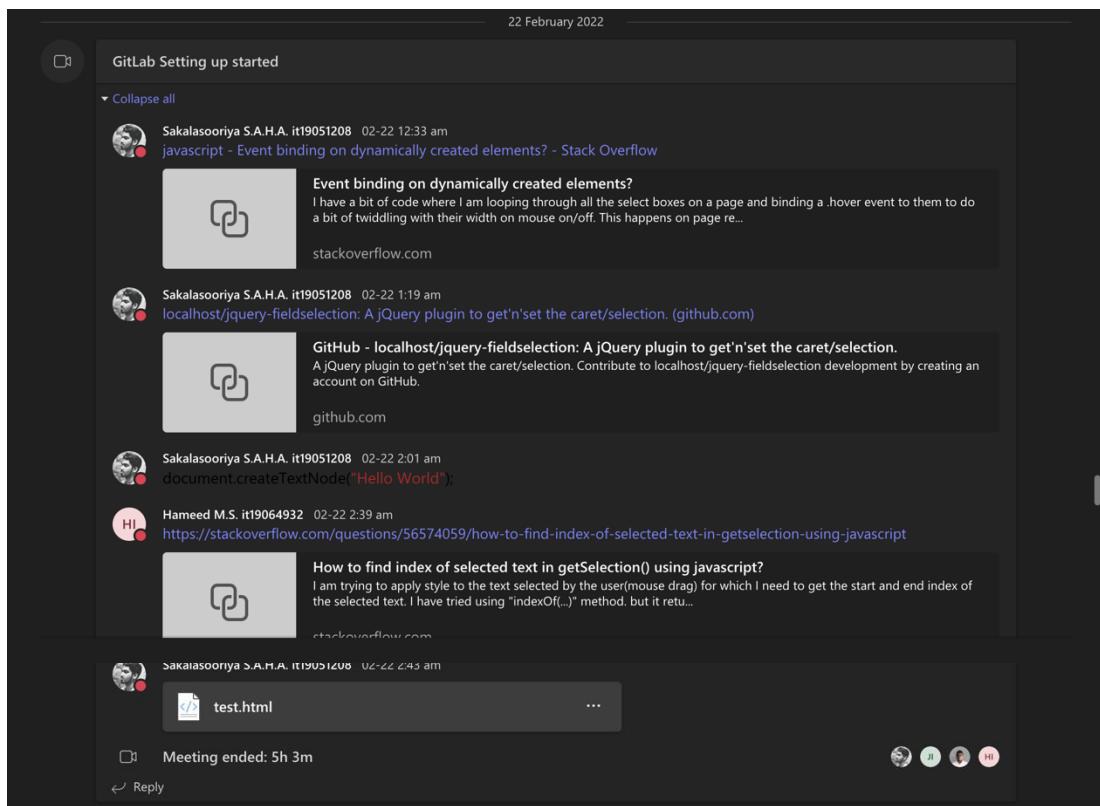


Figure 1.1.19. GitLab repository setting up meeting

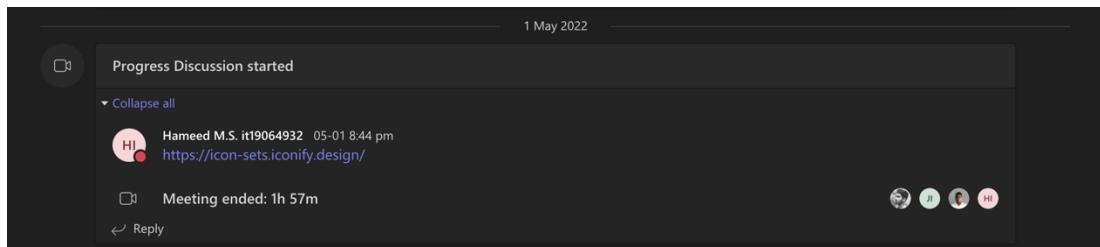


Figure 1.1.20. Research 50% progress discussion meeting with the four members

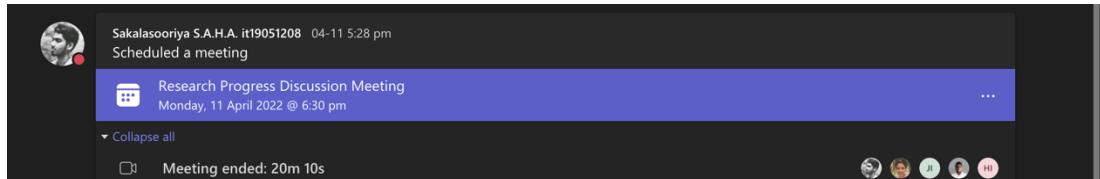
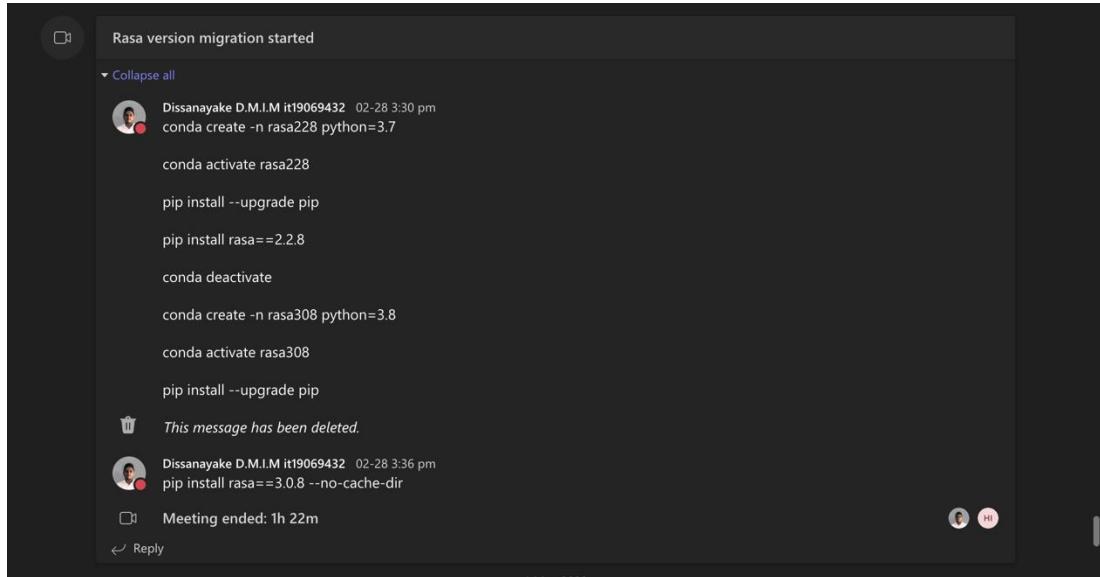


Figure 1.1.21. Research 50% progress discussion meeting with the team including supervisors

Individual Teams meetings



Rasa version migration started

Dissanayake D.M.I.M it19069432 02-28 3:30 pm
conda create -n rasa228 python=3.7

```
conda activate rasa228
pip install --upgrade pip
pip install rasa==2.2.8
conda deactivate
conda create -n rasa308 python=3.8
conda activate rasa308
pip install --upgrade pip
```

This message has been deleted.

Dissanayake D.M.I.M it19069432 02-28 3:36 pm
pip install rasa==3.0.8 --no-cache-dir

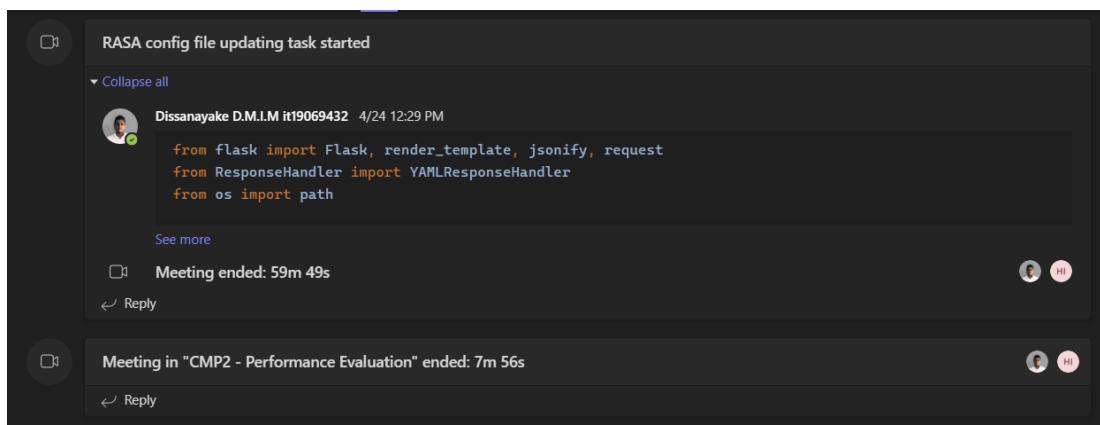
Meeting ended: 1h 22m

1 May 2022

Reply

Hi

Figure 1.1. 22. Rasa version migration meeting



RASA config file updating task started

Dissanayake D.M.I.M it19069432 4/24 12:29 PM

```
from flask import Flask, render_template, jsonify, request
from ResponseHandler import YAMLResponseHandler
from os import path
```

See more

Meeting ended: 59m 49s

Reply

Meeting in "CMP2 - Performance Evaluation" ended: 7m 56s

Reply

Hi

Figure 1.1. 23. Updating Rasa configuration file and discussing research component

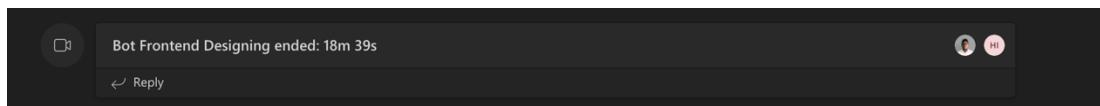


Figure 1.1. 24. Bot frontend design discussion meeting

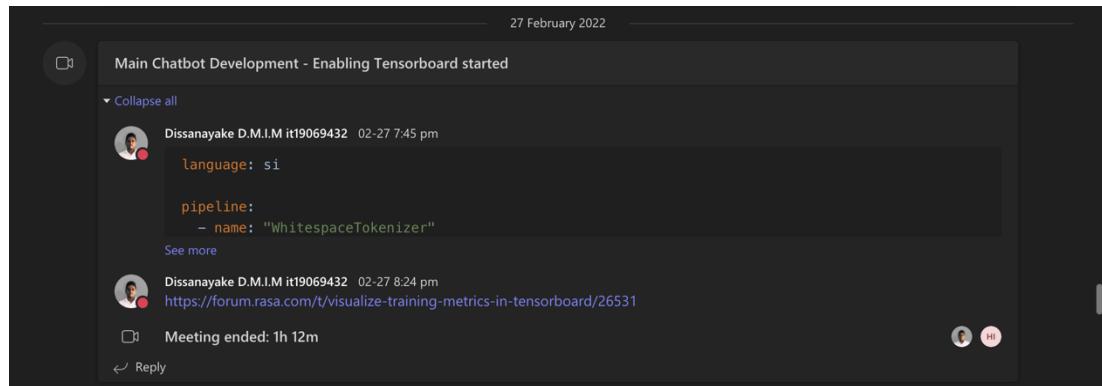


Figure 1.1. 25. Discussion on enabling TensorBoard

1.2 Conversations with the team

Following screenshots include all the conversations that took place via the Microsoft Teams channel, created for the Research project team.

Group conversations

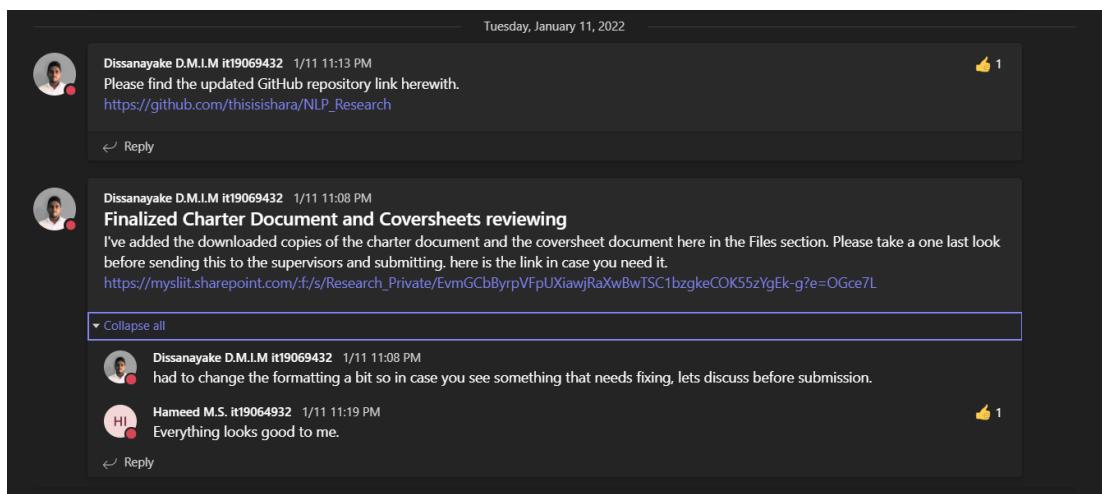


Figure 1.2. 1. Charter document review conversation

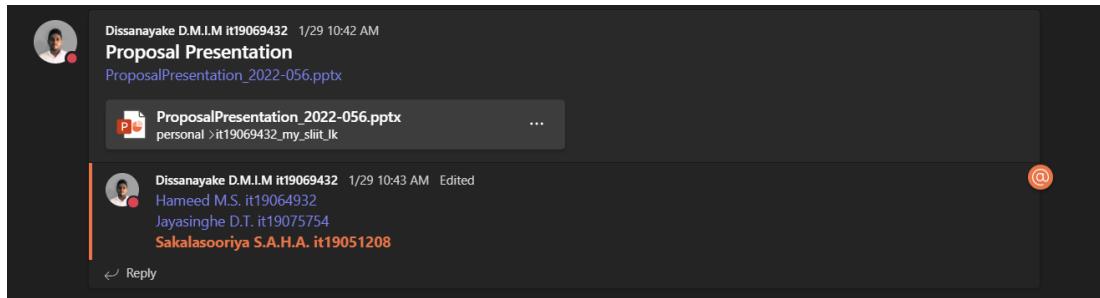


Figure 1.2. 2. Initial proposal presentation sharing and discussion

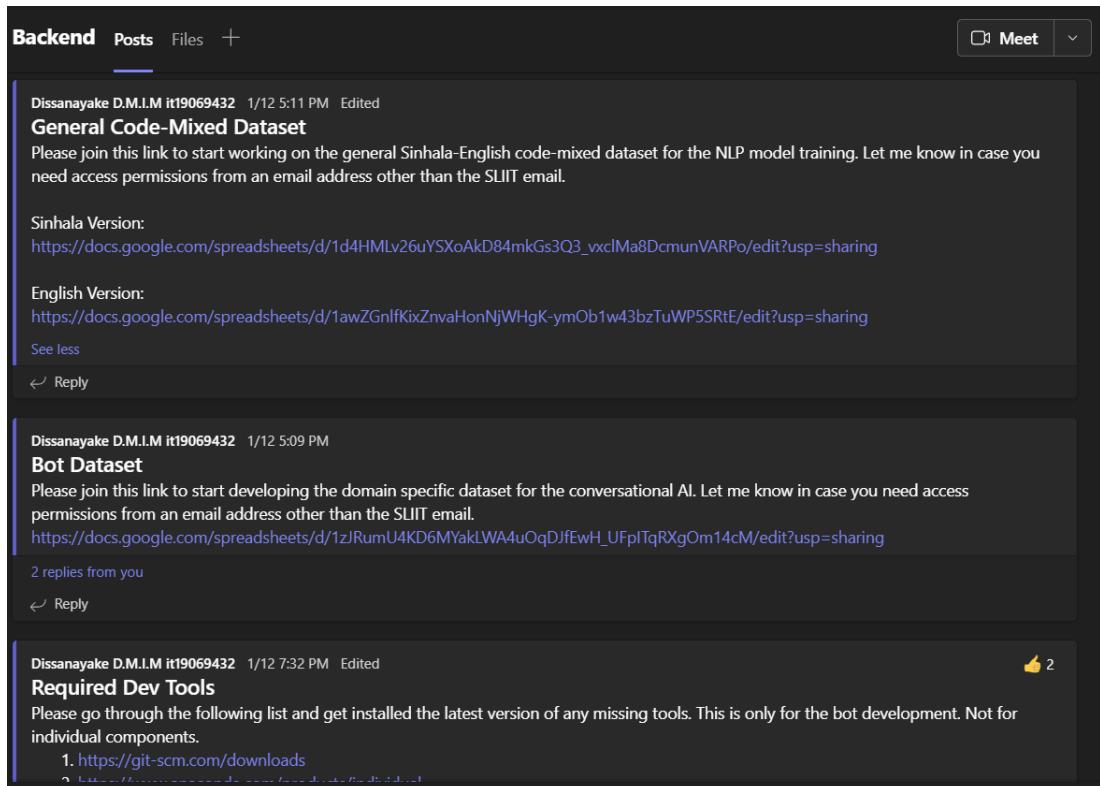


Figure 1.2. 3. Discussion / Resources sharing on dataset and development tools

Individual conversations / replies

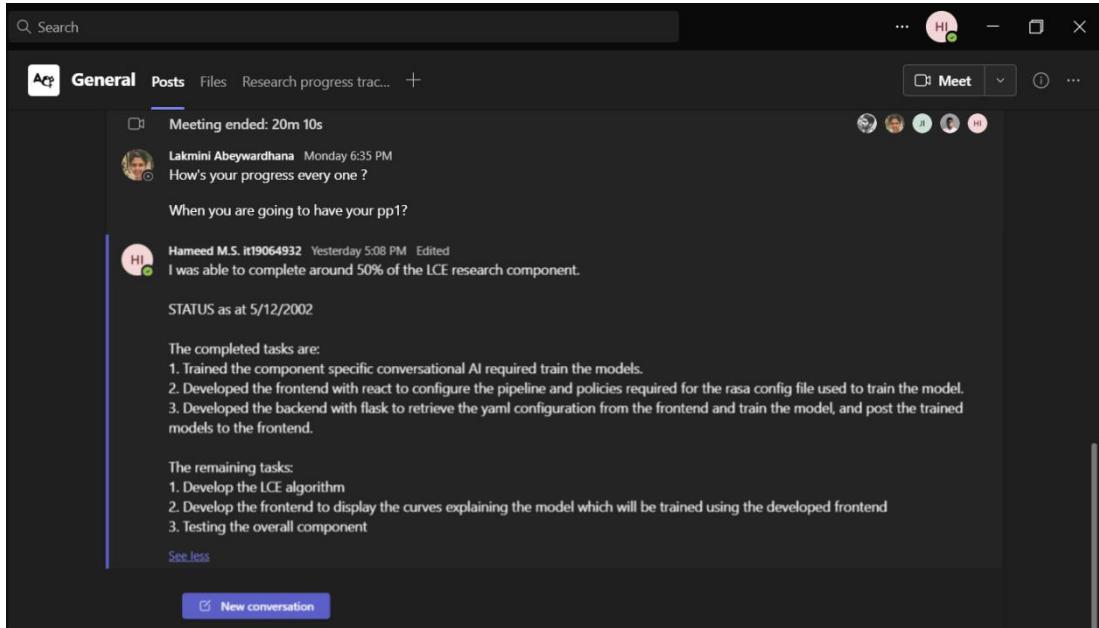


Figure 1.2. 4. Project 50% status update given to supervisor

1.3 MS Teams Planner Project Backlog

Following screenshots include all the project backlogs created using Boards in Microsoft Teams Planner.

The screenshot shows a Microsoft Teams Planner board titled "Assigned to me". The board is divided into three columns: Not started, In progress, and Completed.

- Not started:**
 - Research progress tracker (Due 31/08)
 - Preparation of research paper (Due 07/09)
 - Developing the LCE Algorithm (Due 21/06)
 - Overall component testing - LCE (Due 30/06)
 - Preparation for presentation and viva (Due 21/11)
- In progress:**
 - Research progress tracker (Due 07/09)
 - Developing the Individual Component Frontend - LCE (Due 21/06)
 - Status document/Logbook preparation (Due 07/10)
 - Building the conversational AI (Due 31/08)
- Completed:**
 - Implementing codeless approach (Completed by Hameed M.S. it19...)
 - Completed by Sakalasooriya S.A...
 - Preparation for the proposal presentation (Completed by Sakalasooriya S.A...)
 - Preparation of project proposal document (Completed by Sakalasooriya S.A...)
 - Gathering a repository and initial projects (Completed by Sakalasooriya S.A...)

Figure 1.3. 1. Project backlog with individually assigned tasks to IT19064932

1.4 MS Teams Planner Charts

Following screenshots include all the charts generated by Microsoft teams planner

Group charts

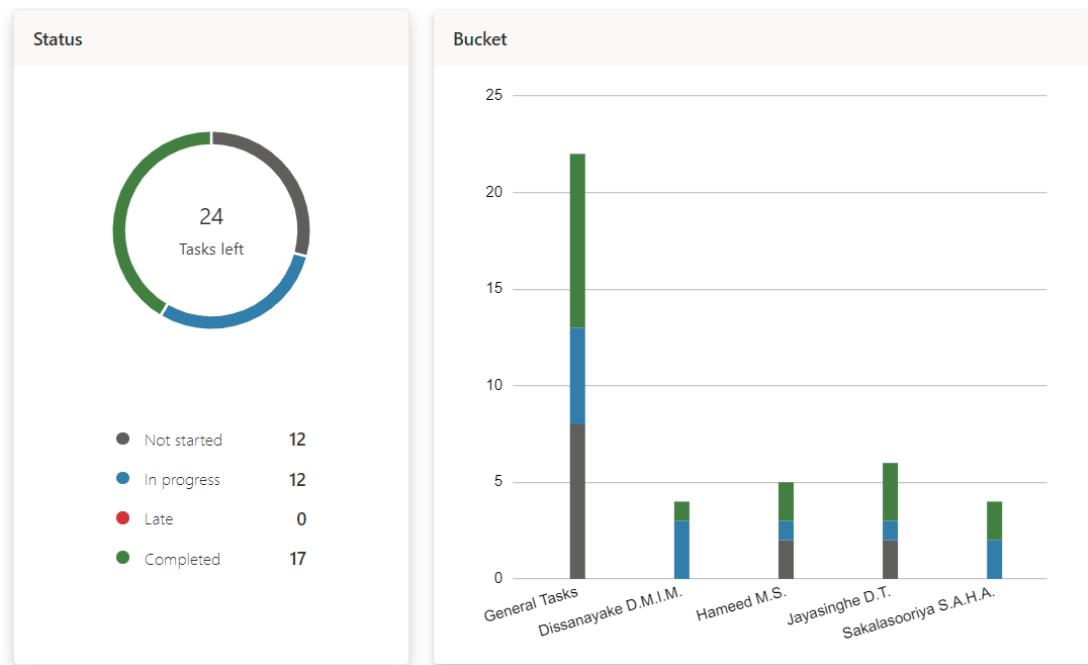


Figure 1.4.1. Number of total tasks and tasks assigned to each member

Individual charts

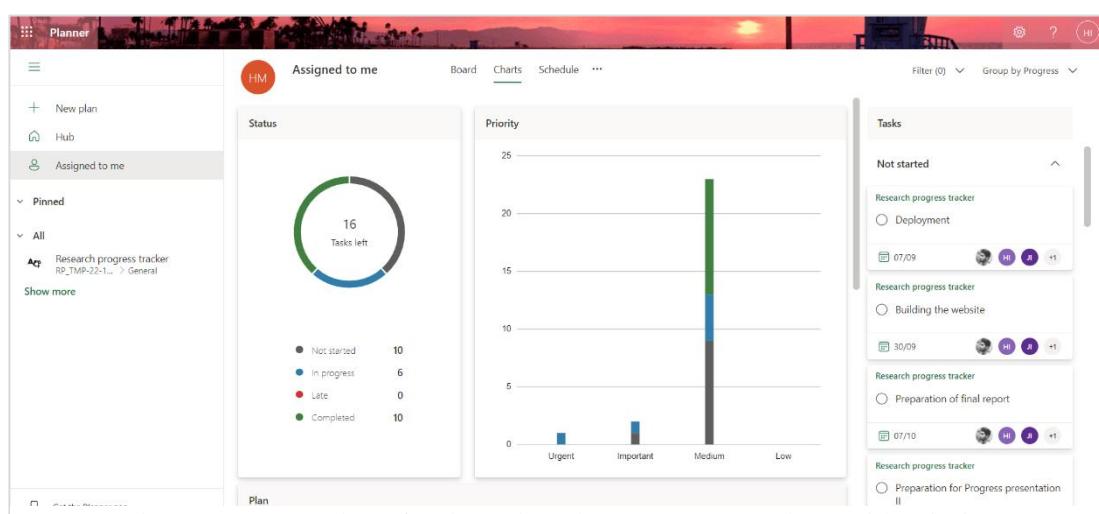
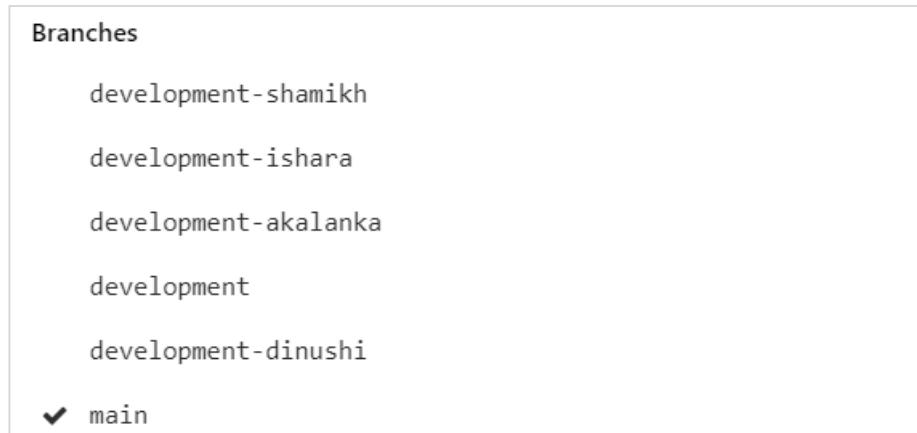


Figure 1.4.2. Number of tasks assigned to IT19064932 along with priority

2. GIT LOGS

2.1 GitLab Branch

The following screenshot shows the Gitlab branches.



A screenshot of a GitLab interface showing a list of branches. The branches listed are: development-shamikh, development-ishara, development-akalanka, development, development-dinushi, and main. The 'main' branch is highlighted with a checkmark icon to its left.

```
Branches
development-shamikh
development-ishara
development-akalanka
development
development-dinushi
✓ main
```

Figure 2.1. 1. GitLab branches created

2.2 GitLab Contributions

The following screenshots include some of the contributions done on Gitlab.



Figure 2.2.1. GitLab commits done over time

Shamikh Hameed
@IT19064932 · Member since February 21, 2022

Overview **Activity** Groups Contributed projects Personal projects Starred projects Snippets

Most Recent Activity

- **Shamikh Hameed** @IT19064932 37 minutes ago
Pushed to branch [development-shamikh](#) at 2022-056 / 2022-056
[0892561c](#) · created the flask file
- **Shamikh Hameed** @IT19064932 41 minutes ago
Pushed to branch [development-shamikh](#) at 2022-056 / 2022-056
[25ac0e6a](#) · updated the gitignore file
- **Shamikh Hameed** @IT19064932 2 months ago
Pushed to branch [development-shamikh](#) at 2022-056 / 2022-056
[fa8e0a6d](#) · Merge branch 'development' into 'development-shamikh'
... and 15 more commits. Compare [42efe48f...fa8e0a6d](#)
- 👤 **Shamikh Hameed** @IT19064932 2 months ago
Accepted merge request [!12](#) "getting the KBI updates" at 2022-056 / 2022-056
- ⌚ **Shamikh Hameed** @IT19064932 2 months ago
Opened merge request [!12](#) "getting the KBI updates" at 2022-056 / 2022-056
- 👤 **Shamikh Hameed** @IT19064932 2 months ago
Accepted merge request [!8](#) "getting bot updates" at 2022-056 / 2022-056
- **Shamikh Hameed** @IT19064932 2 months ago
Pushed to branch [development-shamikh](#) at 2022-056 / 2022-056
[42efe48f](#) · Merge branch 'development' into 'development-shamikh'
... and 21 more commits. Compare [a7f57eff...42efe48f](#)
- ⌚ **Shamikh Hameed** @IT19064932 2 months ago
Opened merge request [!8](#) "getting bot updates" at 2022-056 / 2022-056
- ⌫ **Shamikh Hameed** @IT19064932 2 months ago
Deleted branch patch-2 at 2022-056 / 2022-056
- ⌚ **Shamikh Hameed** @IT19064932 2 months ago
Opened merge request [!4](#) "Update README.md" at 2022-056 / 2022-056
- **Shamikh Hameed** @IT19064932 2 months ago
Pushed new branch patch-2 at 2022-056 / 2022-056
- ☑ **Shamikh Hameed** @IT19064932 2 months ago
Closed merge request [!3](#) "Update README.md" at 2022-056 / 2022-056
- ⌚ **Shamikh Hameed** @IT19064932 2 months ago
Opened merge request [!3](#) "Update README.md" at 2022-056 / 2022-056
- **Shamikh Hameed** @IT19064932 2 months ago
Pushed new branch patch-1 at 2022-056 / 2022-056

Figure 2.2. 2. GitLab recent activity

2.3 Individual GitHub Repositories

The following screenshots include some of the contributions done on GitHub.

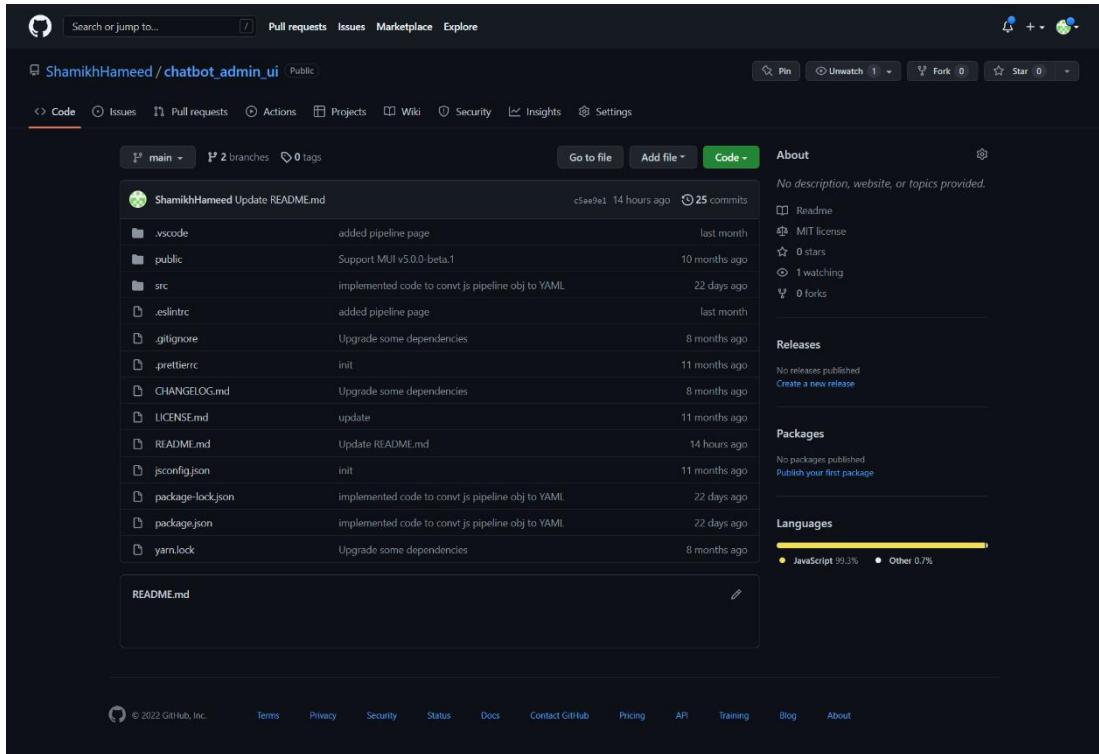


Figure 2.3. 1.GitHub repository used to develop the frontend of the component. Link:
https://github.com/ShamikhHameed/chatbot_admin_ui

3. EMAILS

The following screenshots include some of the emails sent to the supervisors in charge.

3.1 Supervision requesting and confirmation emails

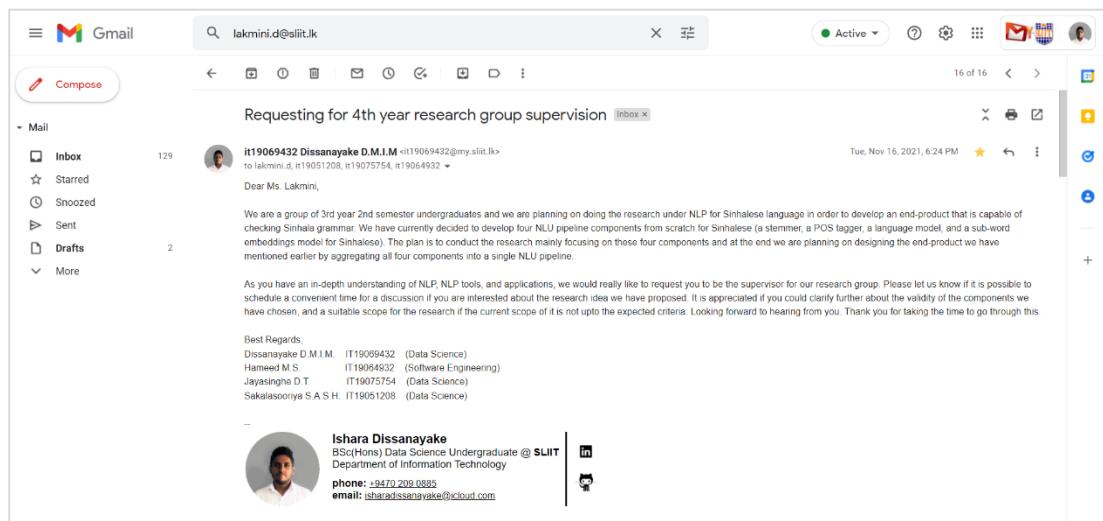


Figure 3.1. 1. Research supervision request email

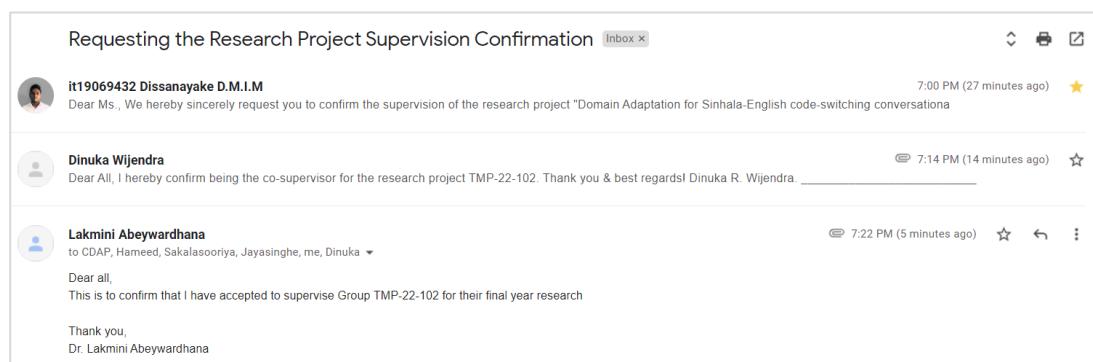


Figure 3.1. 2. Research project supervision confirmation

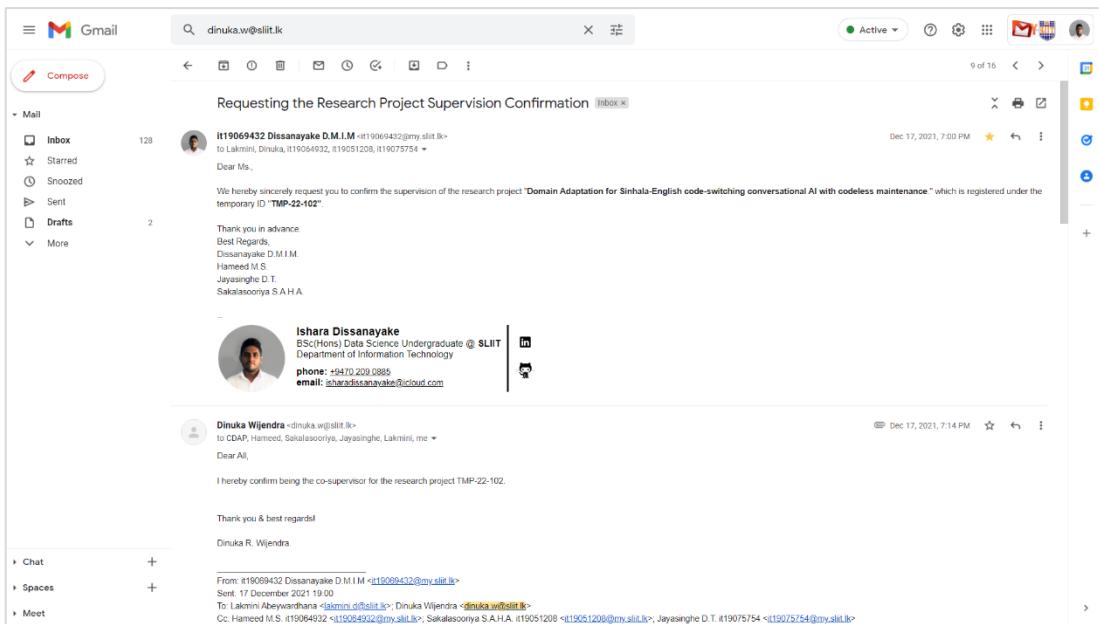


Figure 3.1. 3 Research project co-supervision request and response

3.2 Topic discussion meeting scheduling

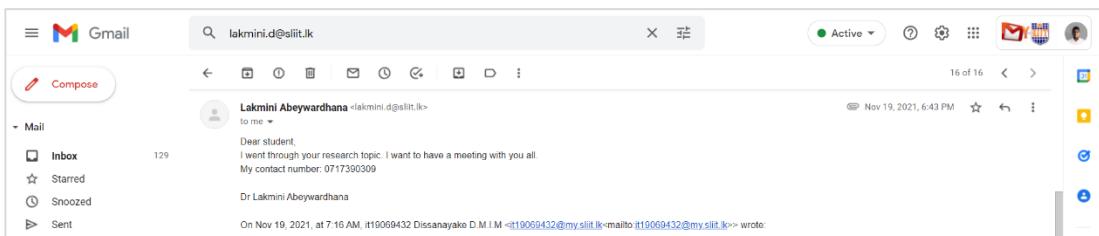


Figure 3.2. 1. Topic discussion meeting scheduling - I

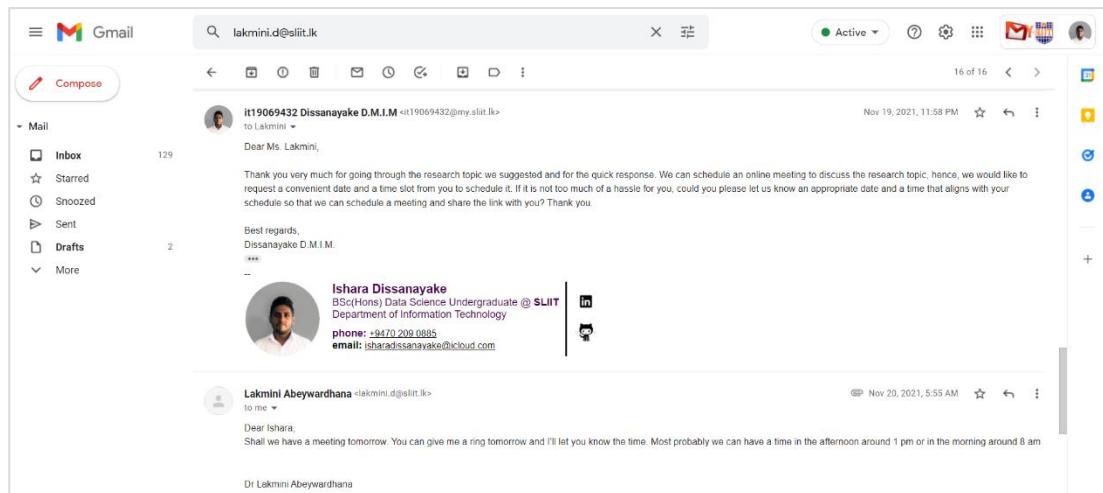


Figure 3.2. 2 Topic discussion meeting scheduling - II

3.3 Research proposal draft review requesting emails

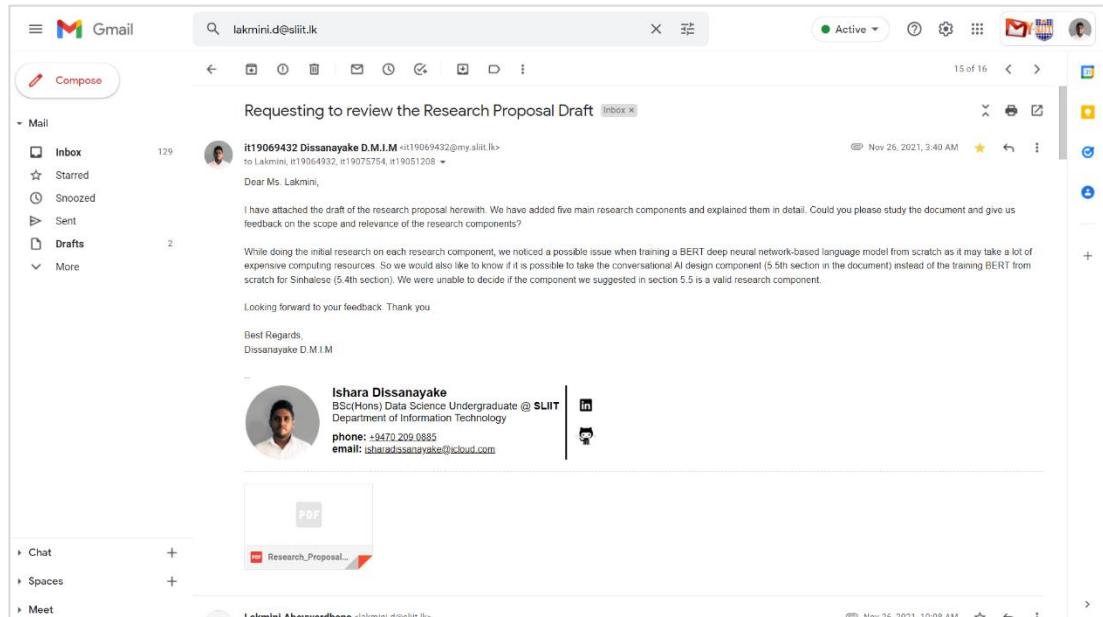


Figure 3.3. 1. Proposal drafts review request

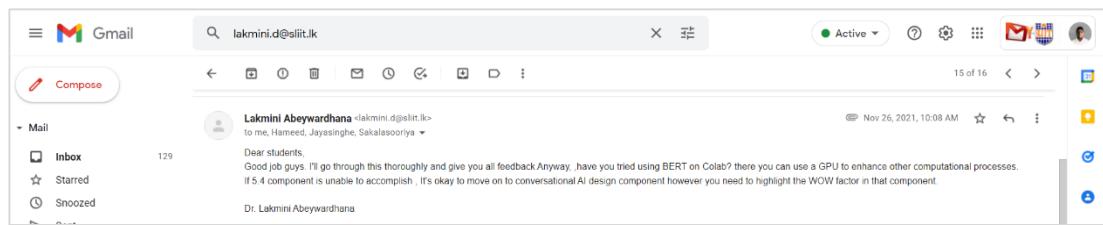


Figure 3.3. 2. Reply of the supervisor on proposal drafts review request

3.4 Progress discussion meeting scheduling

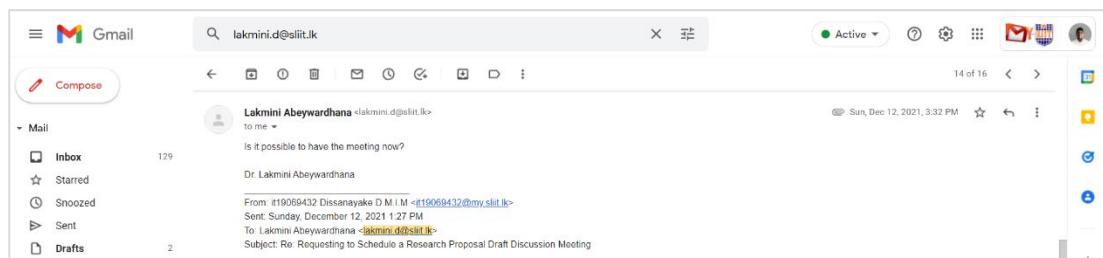


Figure 3.4. 1. Research progress discussion meeting request

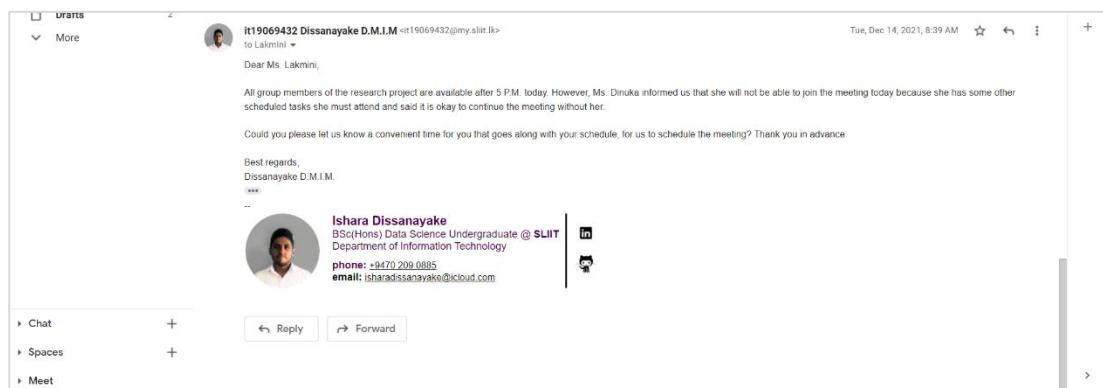


Figure 3.4. 2. Reply for the research progress discussion meeting request

3.5 Topic assessments form review request

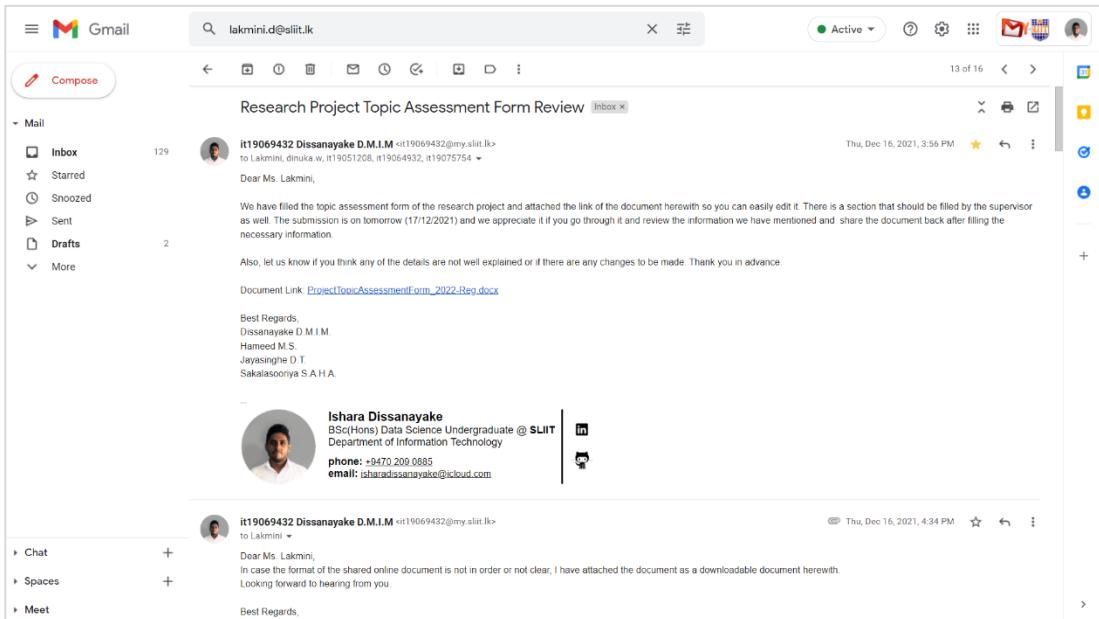


Figure 3.5. 1. Topic assessment form review request - I

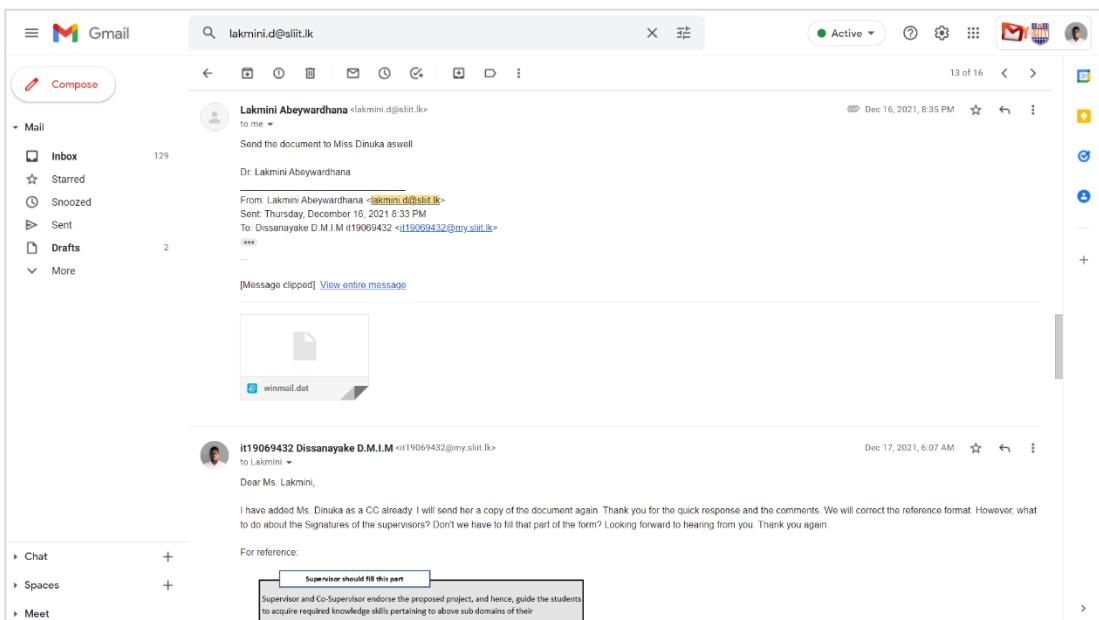


Figure 3.5. 2. Topic assessment form review -II

3.6 Research component changes review request

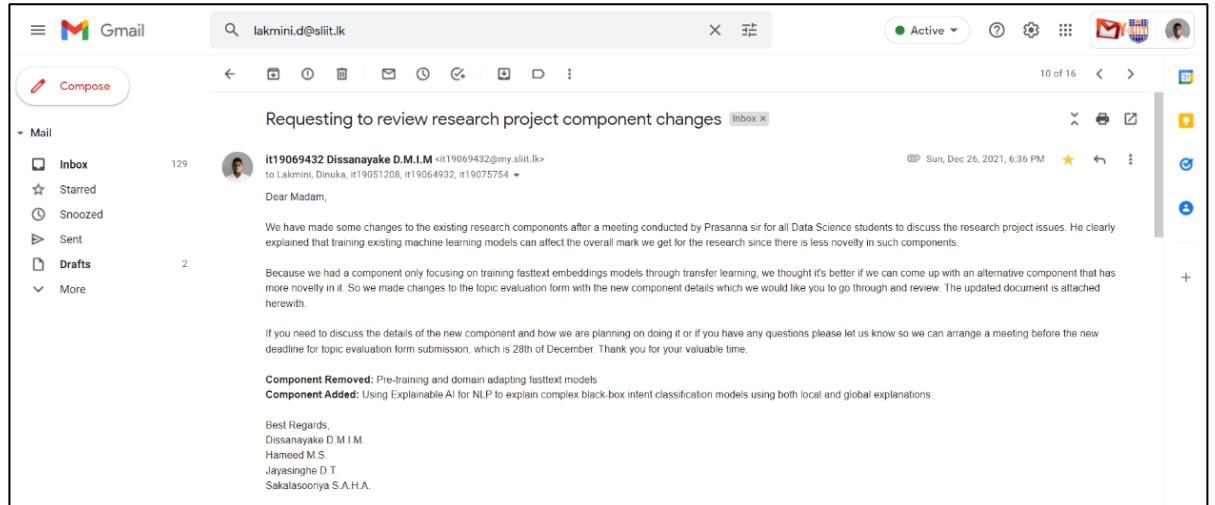


Figure 3.6. 1. Research component/component objective changes review request

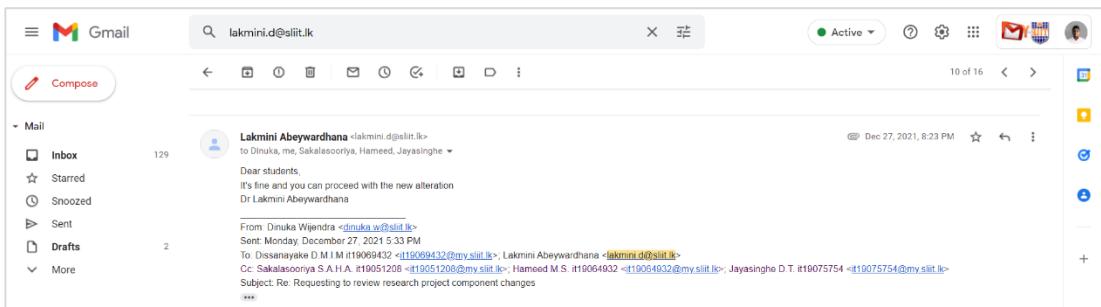


Figure 3.6. 2. Component changes approval of the supervisor

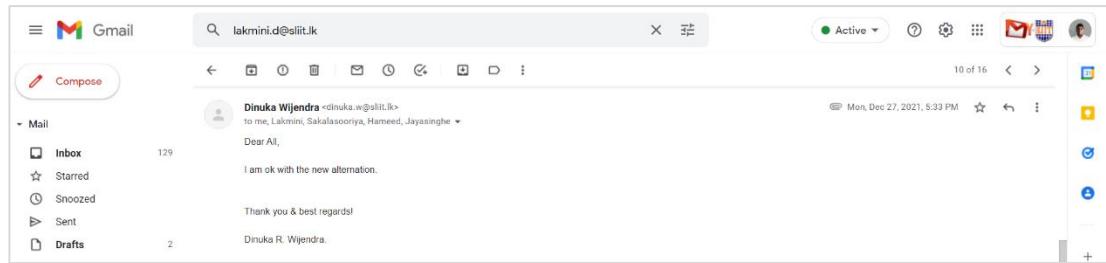


Figure 3.6. 3. Component changes approval of the co-supervisor

3.7 Topic changes review request after panel evaluation was done

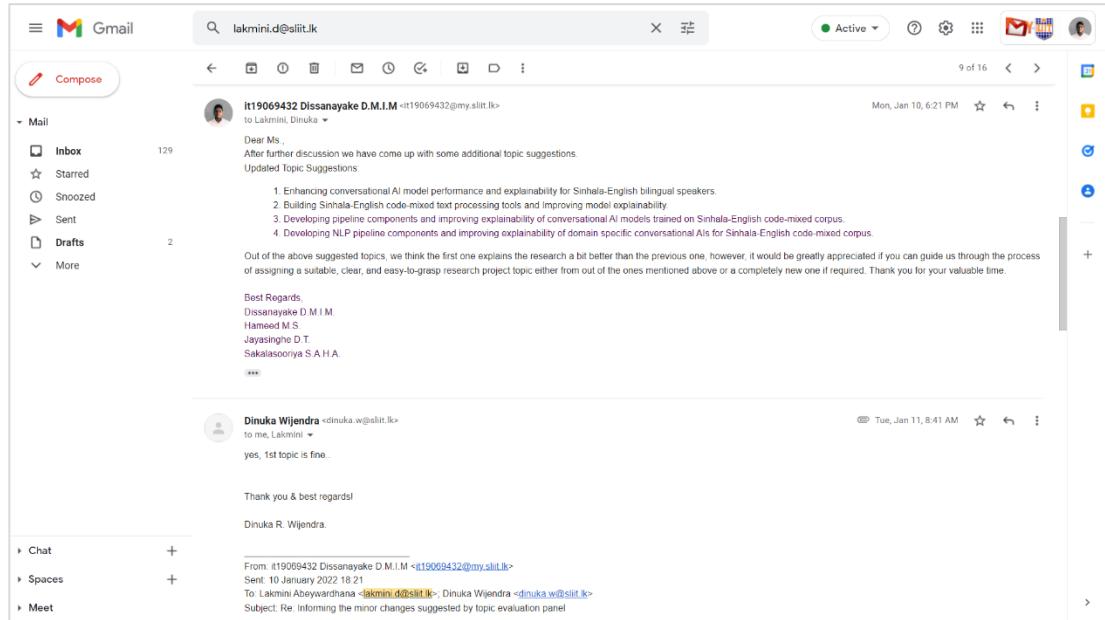


Figure 3.7. 1. Topics suggested by the members due to the suggestion made by the panel

3.8 Individual project proposal documents review request

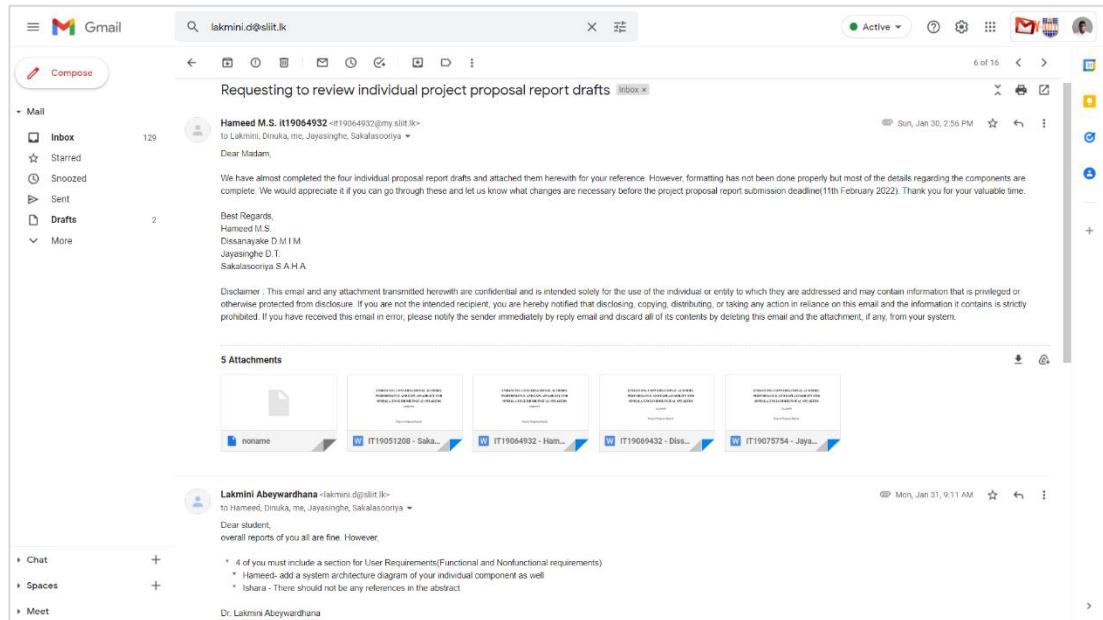


Figure 3.8. 1. Individual proposal draft review request

3.9 Sharing the updated proposal presentation slides deck

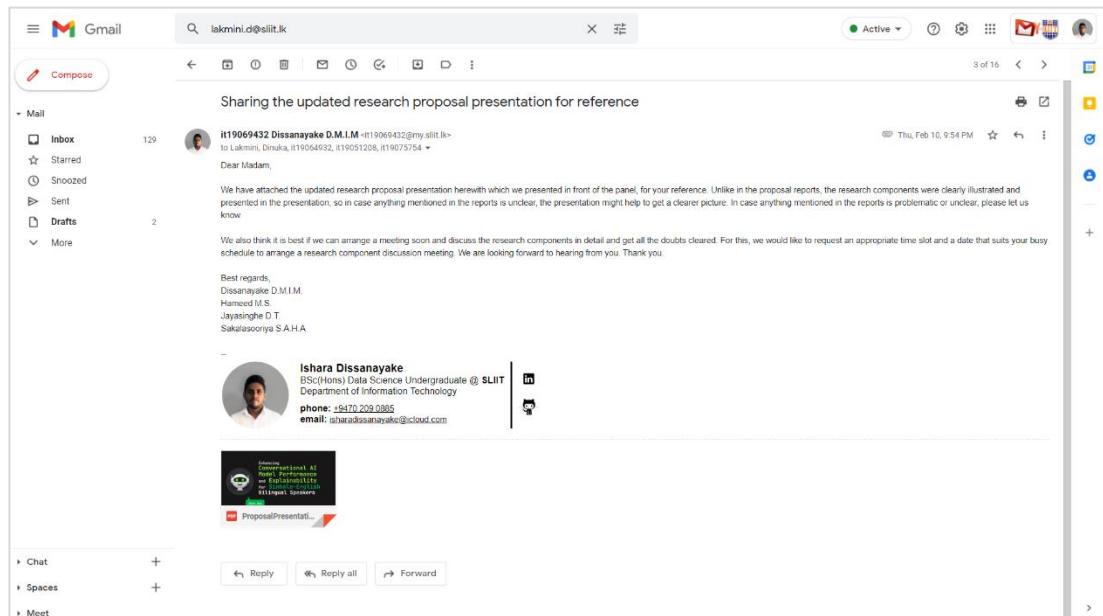


Figure 3.9. 1. Sharing the updated proposal slides deck

3.10 Research progress discussion meeting before progress presentation – I

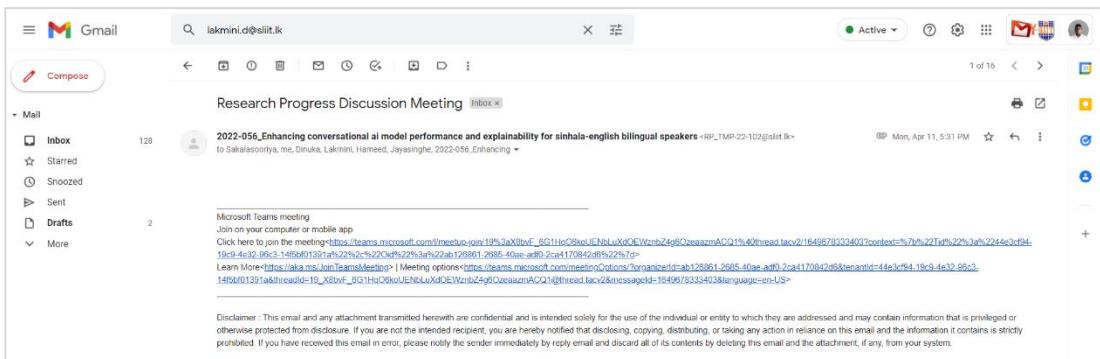


Figure 3.10. 1. 50% progress discussion meeting scheduling

4. GANTT CHART COMPARISON

Figure 4.1 breaks down all tasks of this individual research component under 5 main tasks. Deployment is done at the end by integrating all four research components.

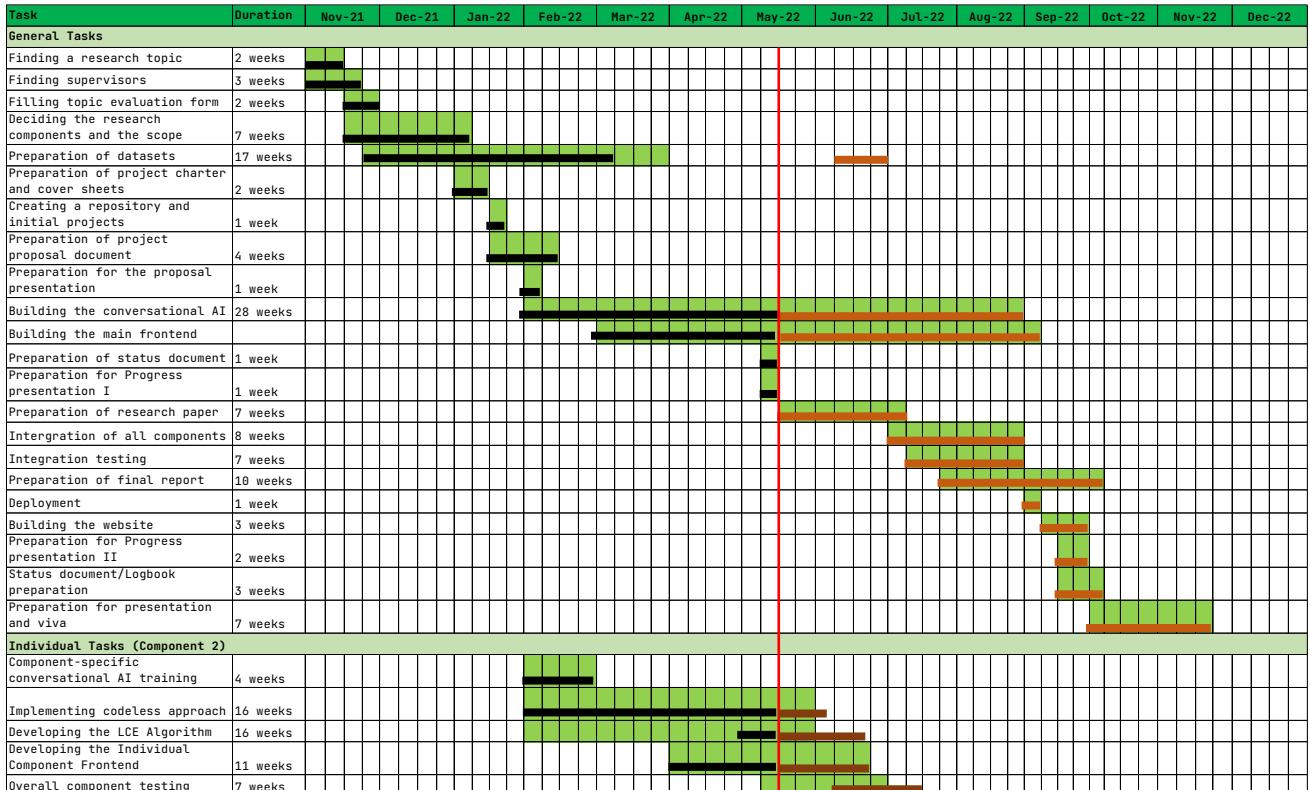


Figure 4.1. Predicted Gantt chart vs actual completion comparison

Legend: Predicted time

Actual spent time

Remaining time for general tasks

Remaining time for individual tasks

5. WORK BREAKDOWN AND TASK STATUS

Figure 5.1 illustrates the work breakdown structure and the completion status of each task within the individual research component.

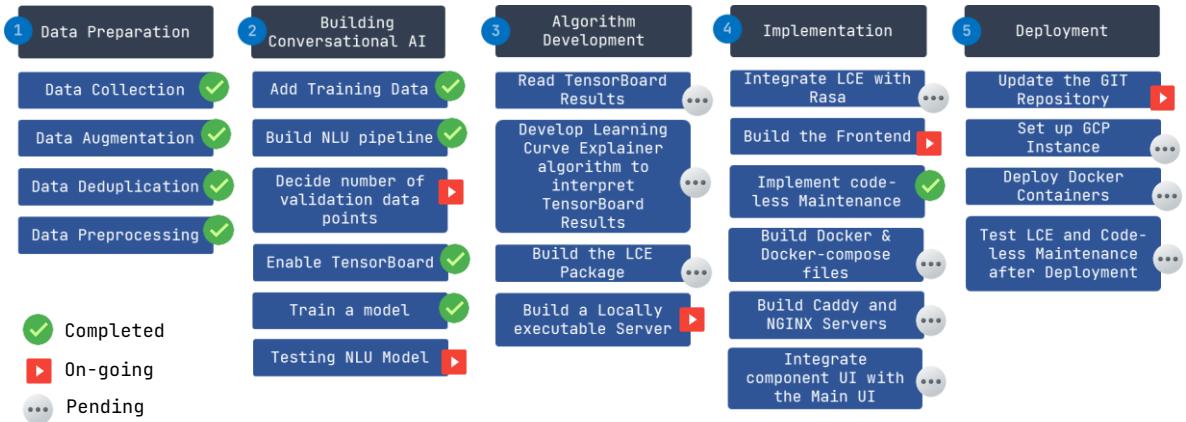


Figure 5. 1. Work breakdown structure, completed, on-going and pending task indications