

**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 Data
Science

Department of Information Technology

Sri Lanka Institute of Information Technology
Sri Lanka

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DECLARATION, COPYRIGHT STATEMENT

We declare that this is our own work, and this project status document does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other university or Institute of higher learning and to the best of our knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

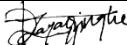
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Jayasinghe D.T.	IT19075754	
Sakalasooriya S.A.H.A.	IT19051208	

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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

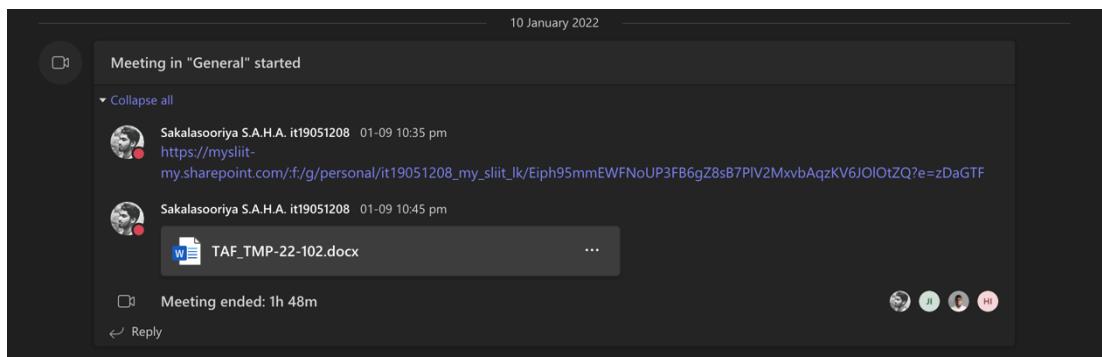


Figure 1.1. 1. Topic assessment form preparation discussion meeting

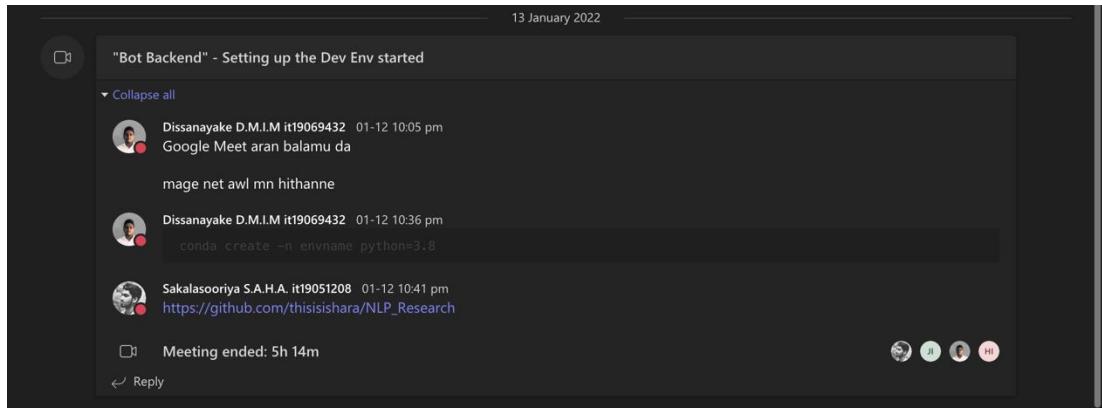


Figure 1.1. 2. Chatbot backend design planning meeting

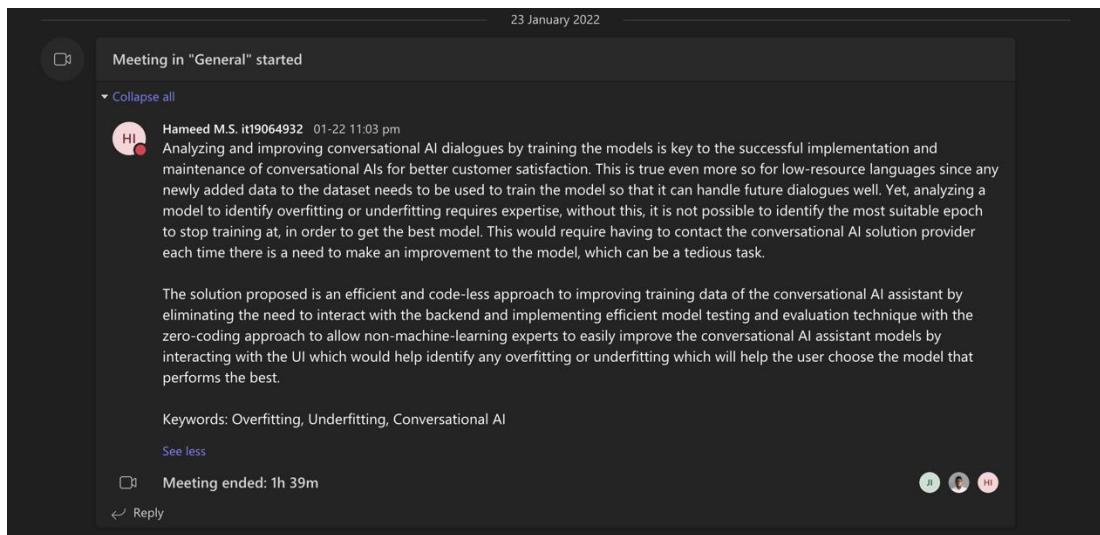


Figure 1.1. 3. Charter document preparation team discussion - I

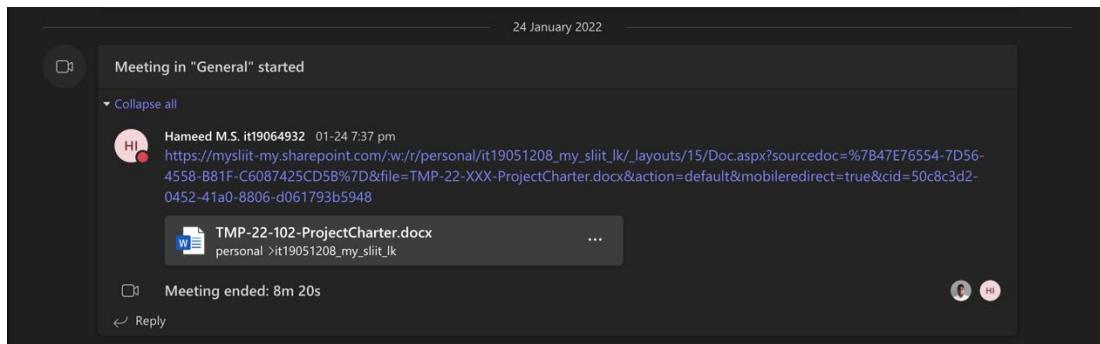


Figure 1.1. 4 Charter document preparation team discussion - II

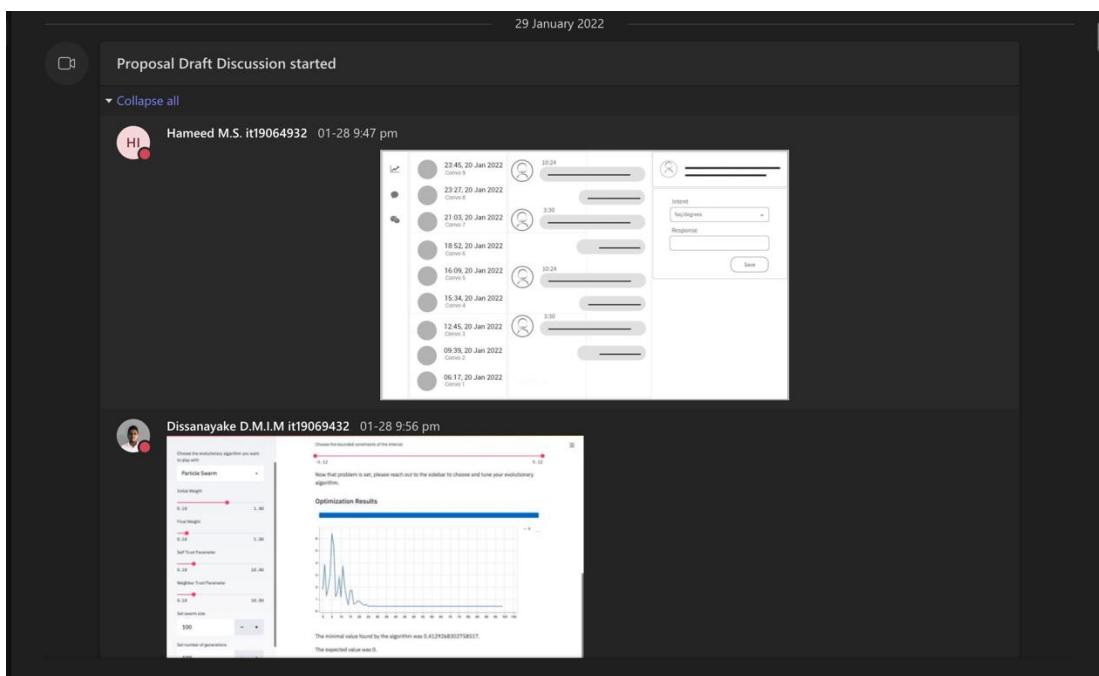


Figure 1.1. 5. Research proposal draft preparation discussion meeting

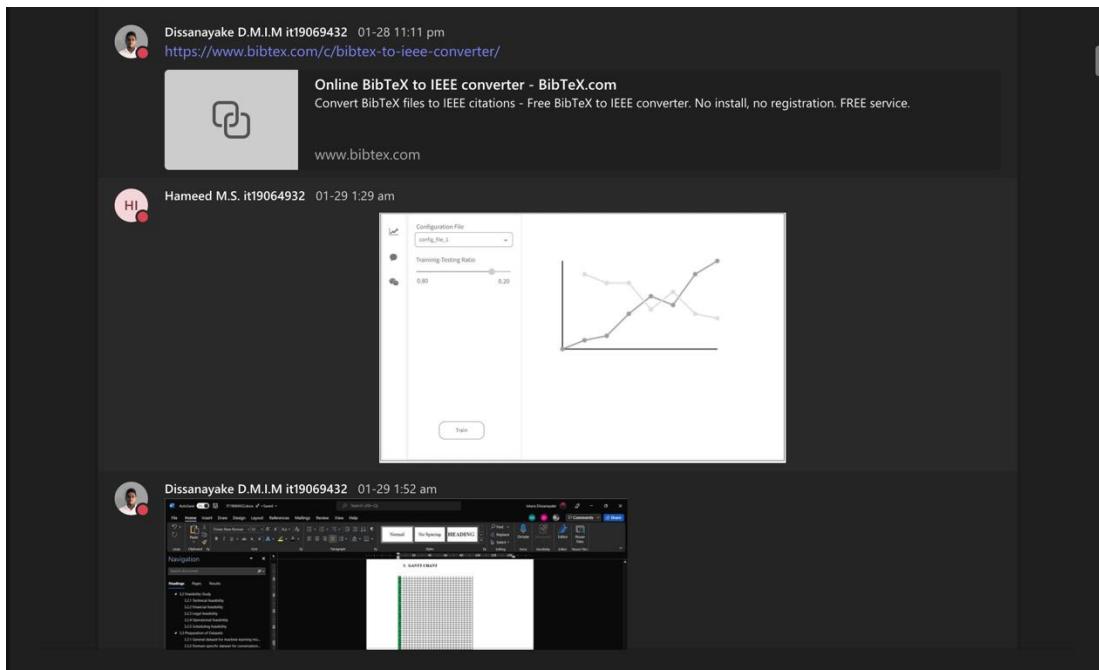


Figure 1.1. 6 Files shared during the project proposal draft meeting - I

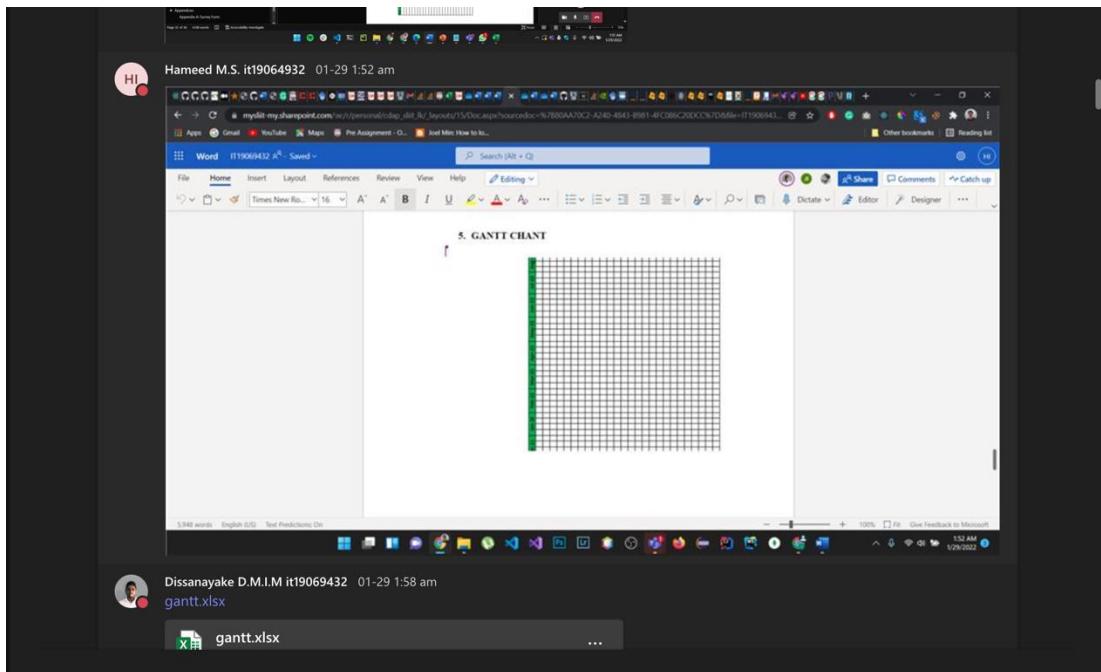


Figure 1.1. 7 Gantt chart designed during the proposal draft discussion meeting - I

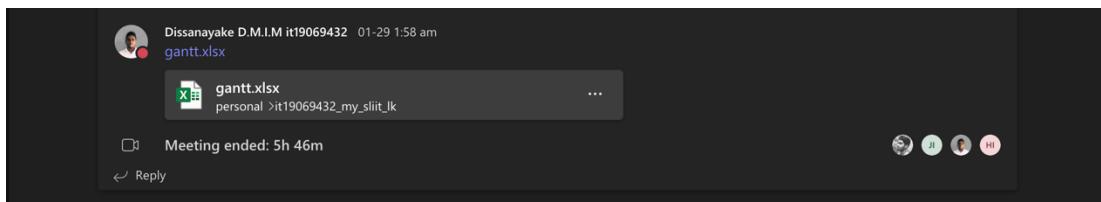


Figure 1.1. 8 Gantt chart designed during the proposal draft discussion meeting - II

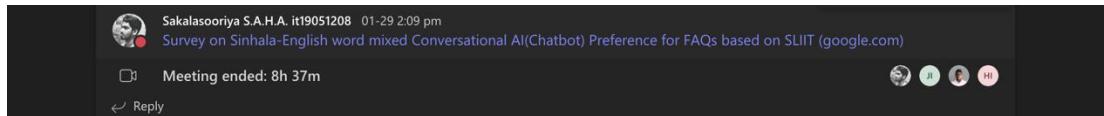


Figure 1.1. 9 Survey planning and designing meeting

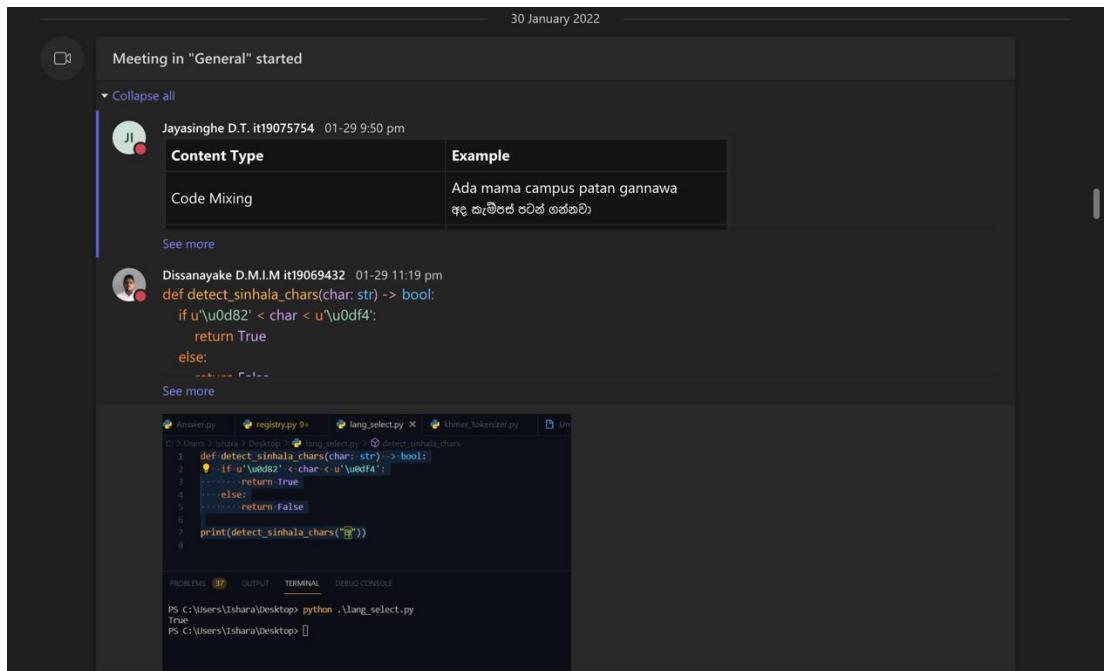


Figure 1.1. 10 Files shared during the project proposal draft meeting - II

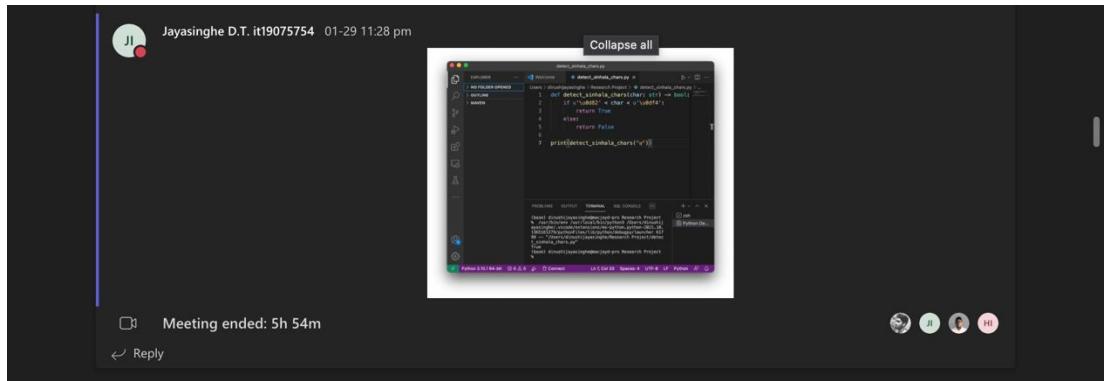


Figure 1.1. 11 Files shared during the project proposal draft meeting - III

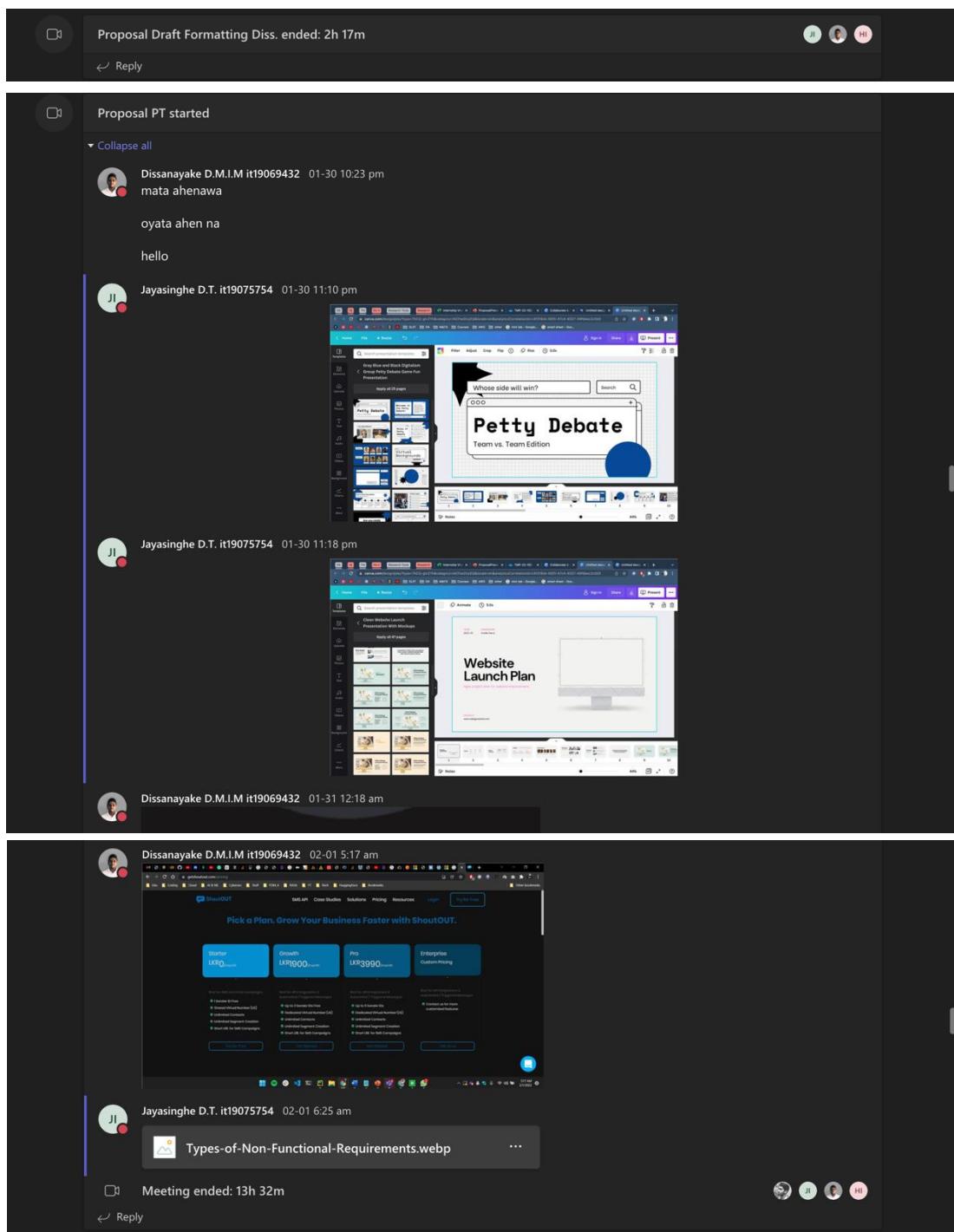


Figure 1.1. 12. Ideas shared during proposal presentation planning discussion - I

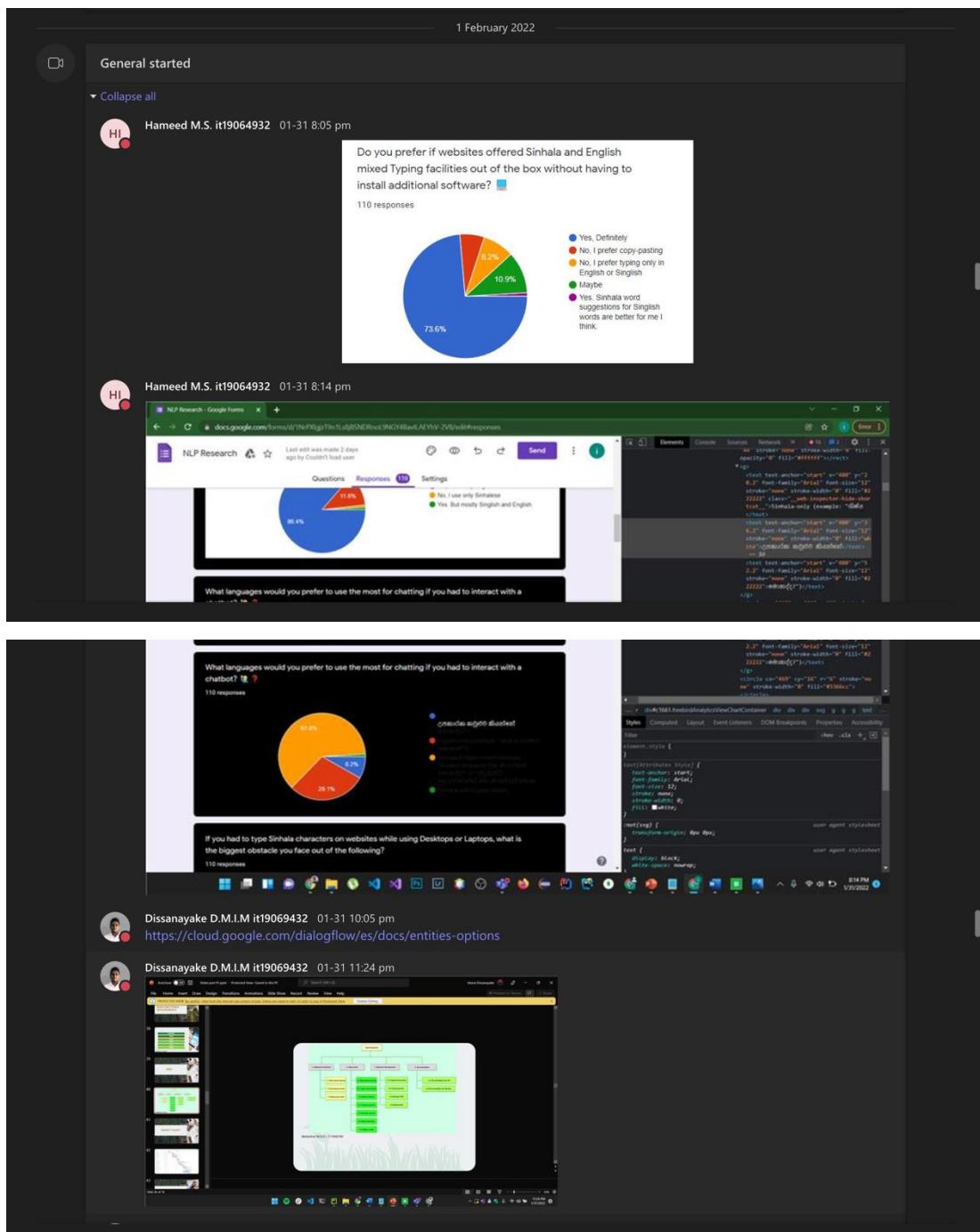


Figure 1.1. 13. Ideas shared during proposal presentation planning discussion - II

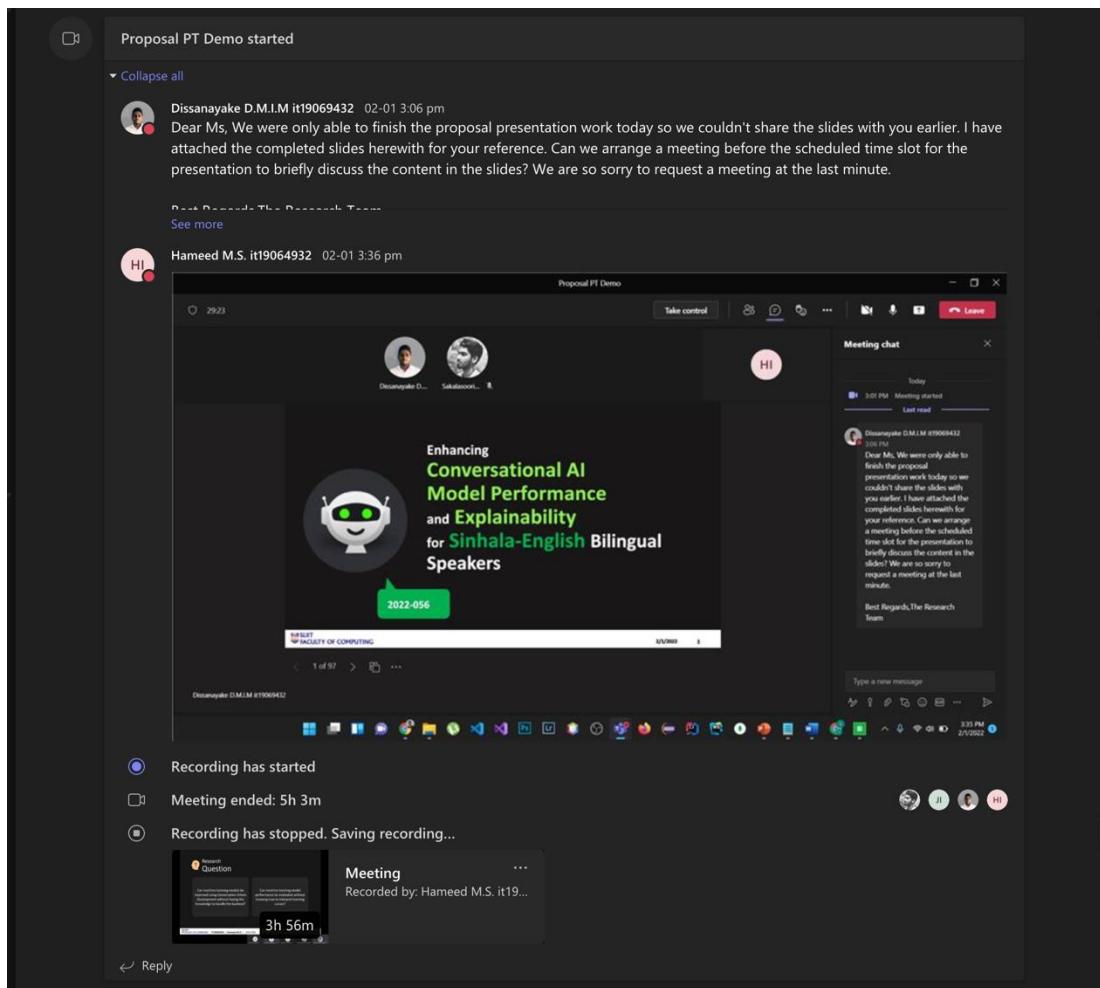


Figure 1.1. 14. Proposal presentation demo meeting

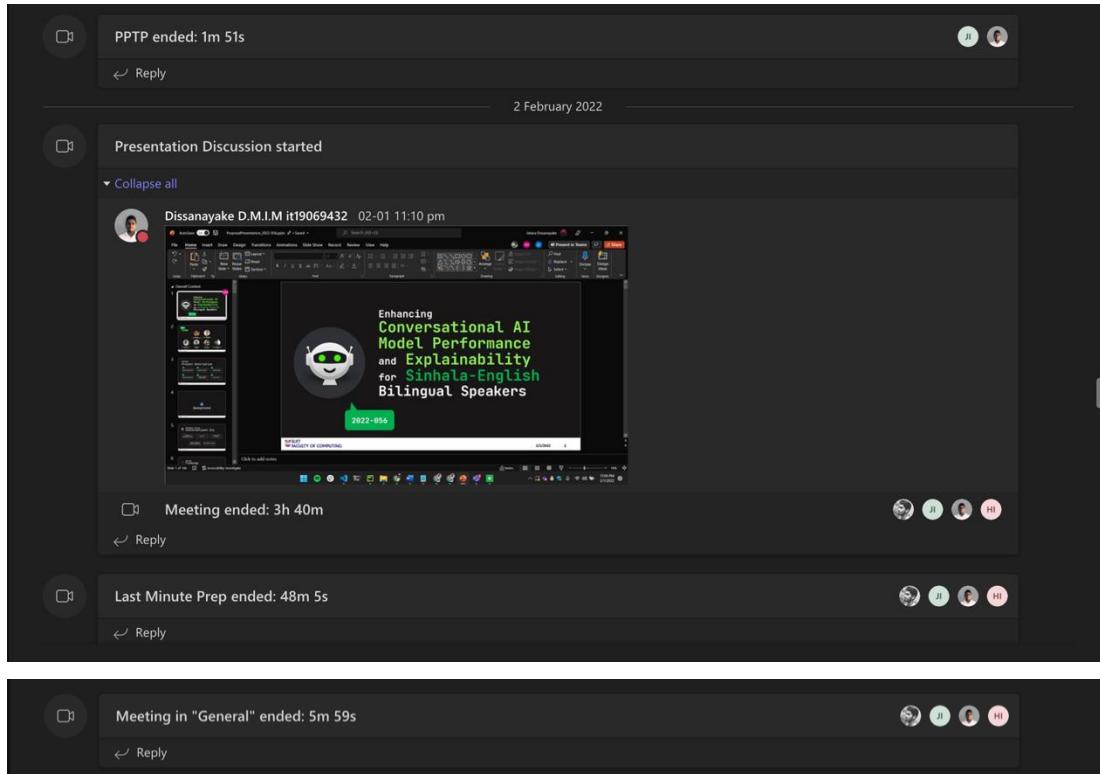


Figure 1.1. 15. Proposal presentation last-minute preparation meetings

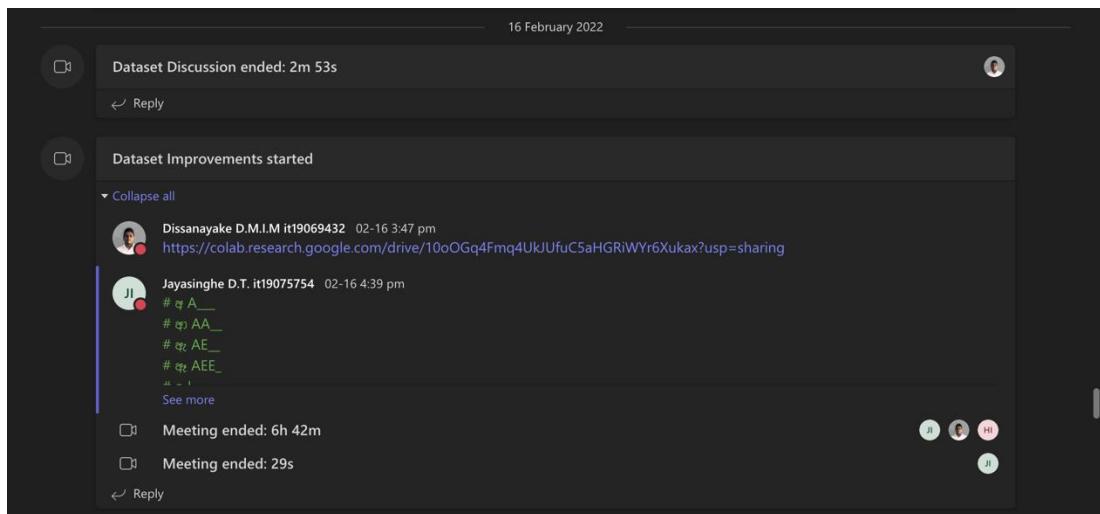


Figure 1.1. 16. Initial dataset preparation planning discussion meeting

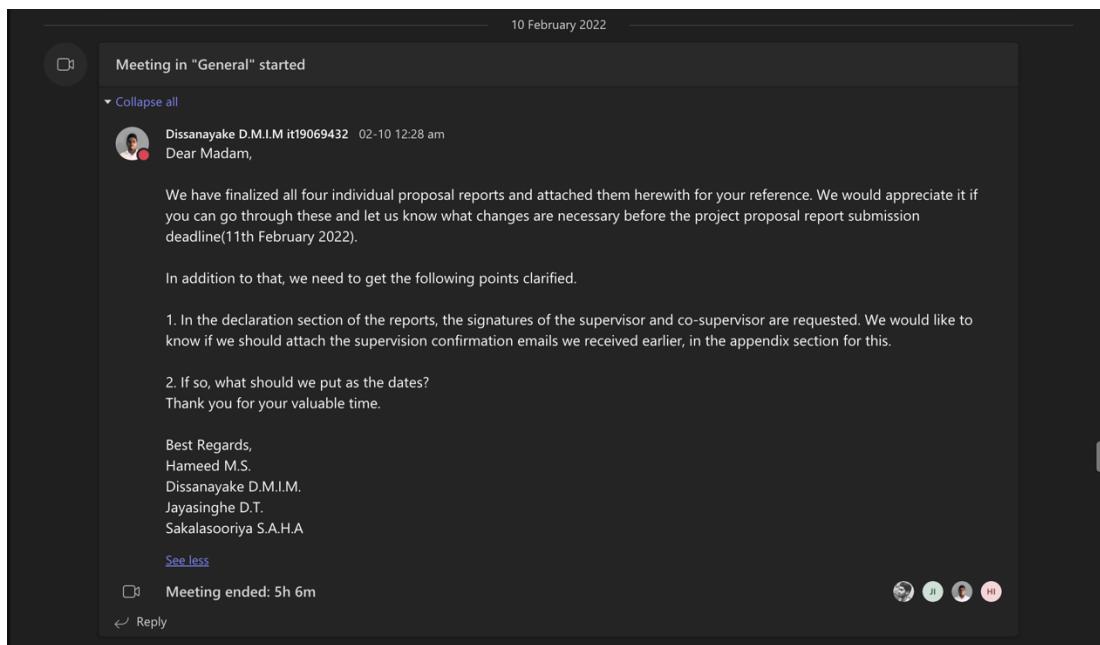


Figure 1.1. 17. Proposal draft submission finalization meeting

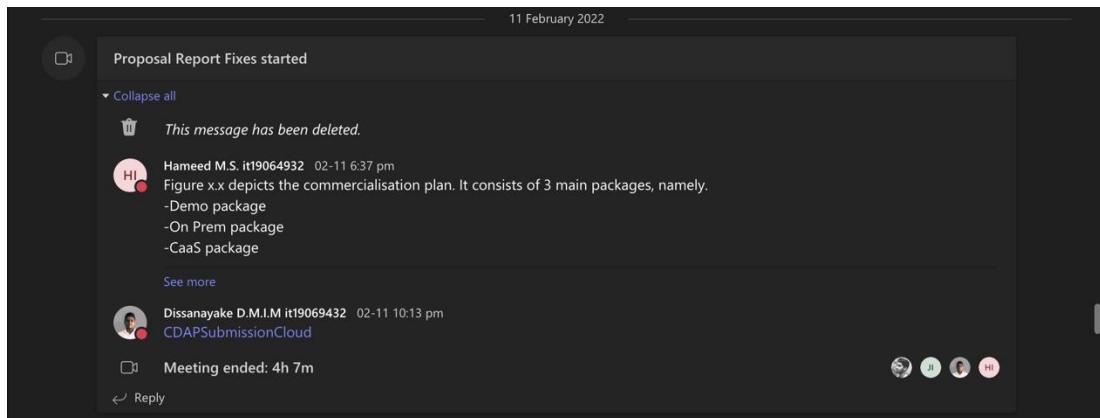


Figure 1.1. 18. Proposal draft review and proofreading discussion

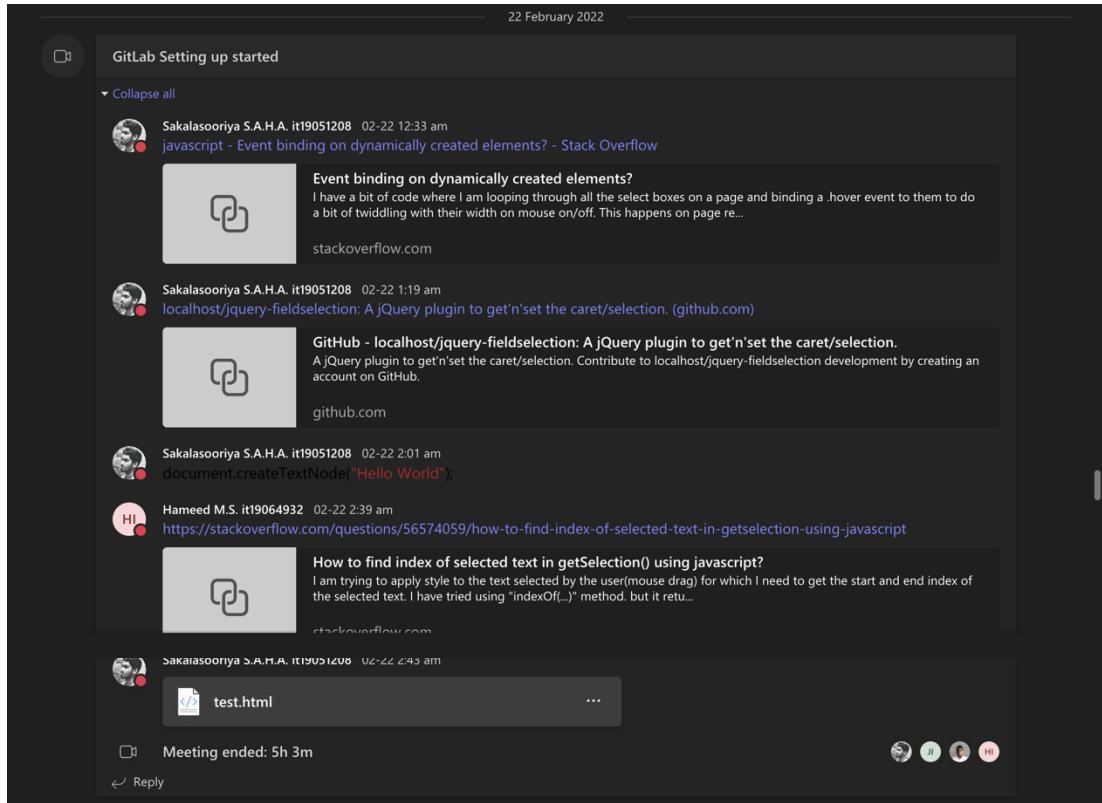


Figure 1.1. 19 GitLab repository setting up meeting

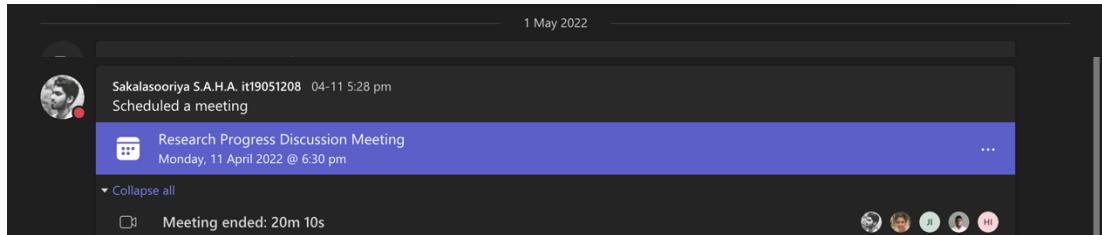


Figure 1.1. 21 Research 50% progress discussion meeting with the team including supervisors

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

The screenshot shows a Microsoft Teams message thread from January 11, 2022. The first message is from Dissanayake D.M.I.M. at 11:13 PM, sharing a GitHub repository link: https://github.com/thisishara/NLP_Research. The second message is from Dissanayake D.M.I.M. at 11:08 PM, titled "Finalized Charter Document and Coversheets reviewing". It includes a note about added charter and coversheet documents and a link: https://mysliit.sharepoint.com/:f/s/Research_Private/EvmGCbByrpVFpUXlawjRaXwBwTSC1bzgkeCOK55zYgEk-g?e=OGce7L. The third message is from Hameed M.S. at 11:19 PM, replying that everything looks good to them. The fourth message is from Dissanayake D.M.I.M. at 11:08 PM, stating they had to change the formatting and asking for discussion before submission.

Figure 1.2. 1. Charter document review conversation

The screenshot shows a Microsoft Teams message thread from January 29, 2022. The first message is from Dissanayake D.M.I.M. at 10:42 AM, sharing a PowerPoint presentation titled "Proposal Presentation" with the file path: [ProposalPresentation_2022-056.pptx](#). A file preview shows the presentation title page. The second message is from Dissanayake D.M.I.M. at 10:43 AM, edited by Hameed M.S. and Jayasinghe D.T., and also shared by Sakalasooriya S.A.H.A. The message includes the file path: [personal >it19069432_my_sliit_lk](#). The third message is from Dissanayake D.M.I.M. at 10:43 AM, responding to the edits.

Figure 1.2. 2 Initial proposal presentation sharing and discussion

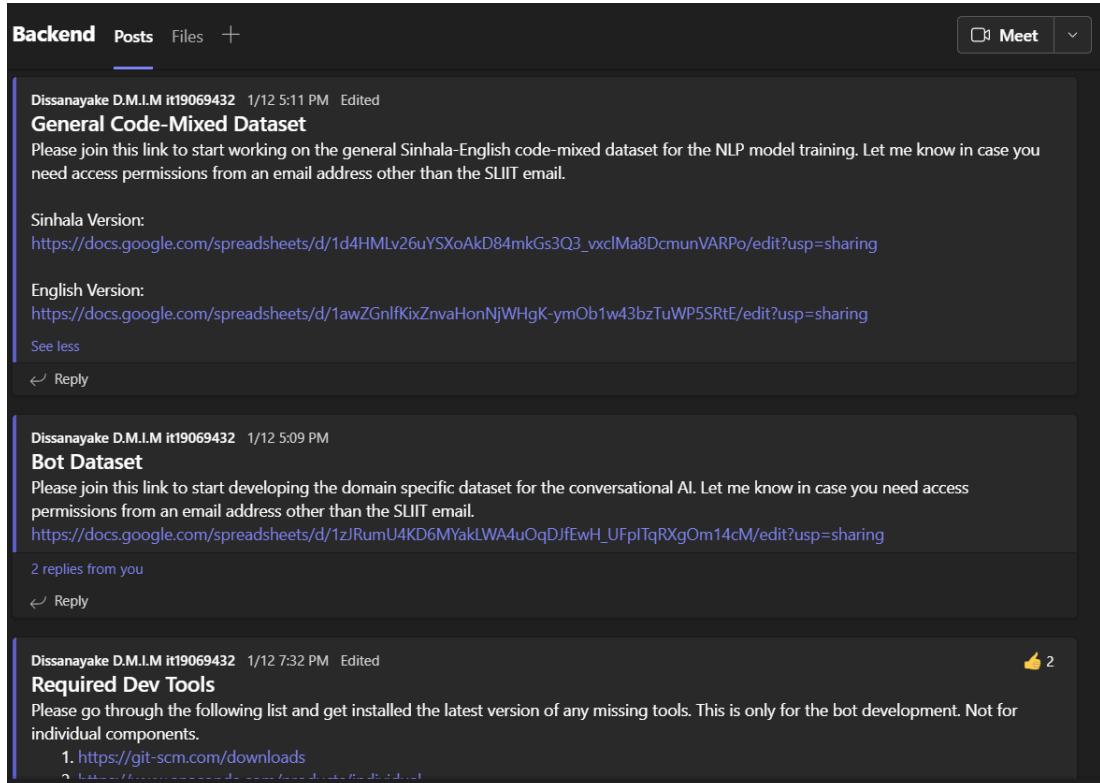


Figure 1.2. 3. Discussion / Resources sharing on dataset and development tools

Individual conversations / replies

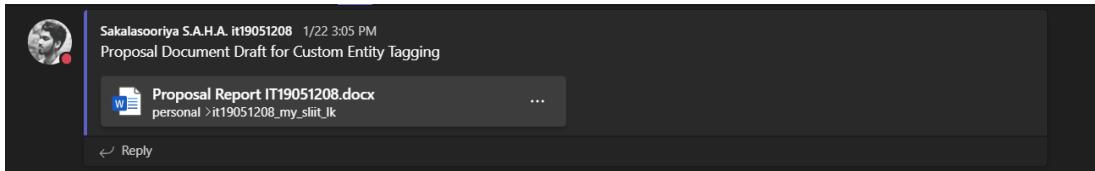


Figure 1.2. 4 Proposal report for the individual component

A screenshot of a team communication platform. The top navigation bar includes a search bar, a general tab, and a "Meet" button. The main area shows a conversation between multiple users. One user, Lakmini Abeywardhana, asks about progress. Another user, Dissanayake D.M.I.M it19069432, responds that they completed around 50% of the XAI research component. A third user, Sakalasooriya S.A.H.A. it19051208, also reports 50% completion of the Custom Entity Tagging component. Both users mention a status update as of May 12, 2022. A section titled "The completed tasks are:" lists five items related to Sinhala lemmatization and prefix identification. Another section, "The remaining tasks:", lists three items: evaluate word similarity algorithms, integrate them with the SIENA tool, and integrate with the overall solution. A user named Hameed M.S. it19064932 also contributes, stating they completed around 50% of the LCE research component. A "New conversation" button is at the bottom.

Figure 1.2. 5 Progress update

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 organized into three columns: "Not started", "In progress", and "Completed".

- Not started:**
 - Research progress tracker (Deployment) - Due 09/07
 - Research progress tracker (Building the website) - Due 09/30
 - Research progress tracker (Preparation of final report) - Due 10/07
 - Research progress tracker (Preparation for Progress presentation II) - Due 09/30
 - Research progress tracker (Integration testing)
- In progress:**
 - Research progress tracker (Preparation for Progress presentation I) - Due 05/14
 - Research progress tracker (Preparation of status document - I) - Due 05/13
 - Research progress tracker (Building the main frontend) - Due 09/07
 - Research progress tracker (Status document/Logbook preparation)
- Completed:**
 - Research progress tracker (Preparation of the dataset for custom entity-annotating) - Completed by Sakalasooriya S.A. - Due 05/14
 - Research progress tracker (Developing the entity-identification algorithms) - Completed by Sakalasooriya S.A. - Due 05/13
 - Research progress tracker (Preparation for the proposal presentation) - Completed by Sakalasooriya S.A. - Due 09/07
 - Research progress tracker (Preparation of project proposal document) - Completed by Sakalasooriya S.A. - Due 05/13

Figure 1.3. 1. Project backlog with individually assigned tasks to IT19051208

1.4 MS Teams Planner Charts

Following screenshots include all the charts generated by Microsoft teams planner

Group charts

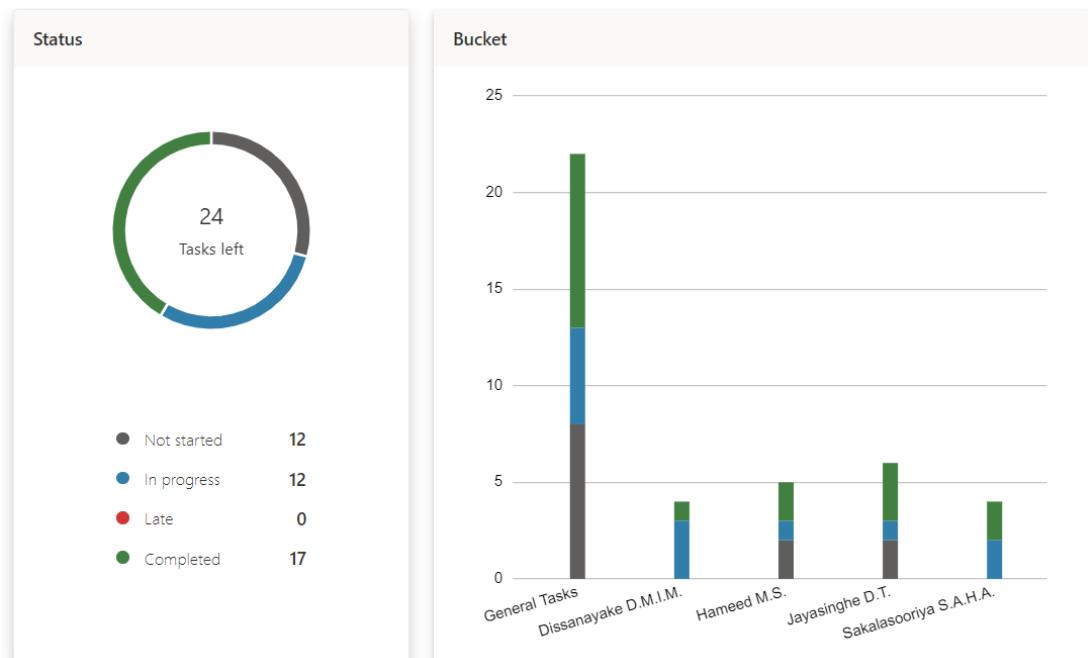


Figure 1.4. 1 Number of total tasks and tasks assigned to each member

Figure 1.4. 2 Number of tasks assigned to IT19051208 along with priority
Figure 1.4. 3
Number of total tasks and tasks assigned to each member

Individual chart

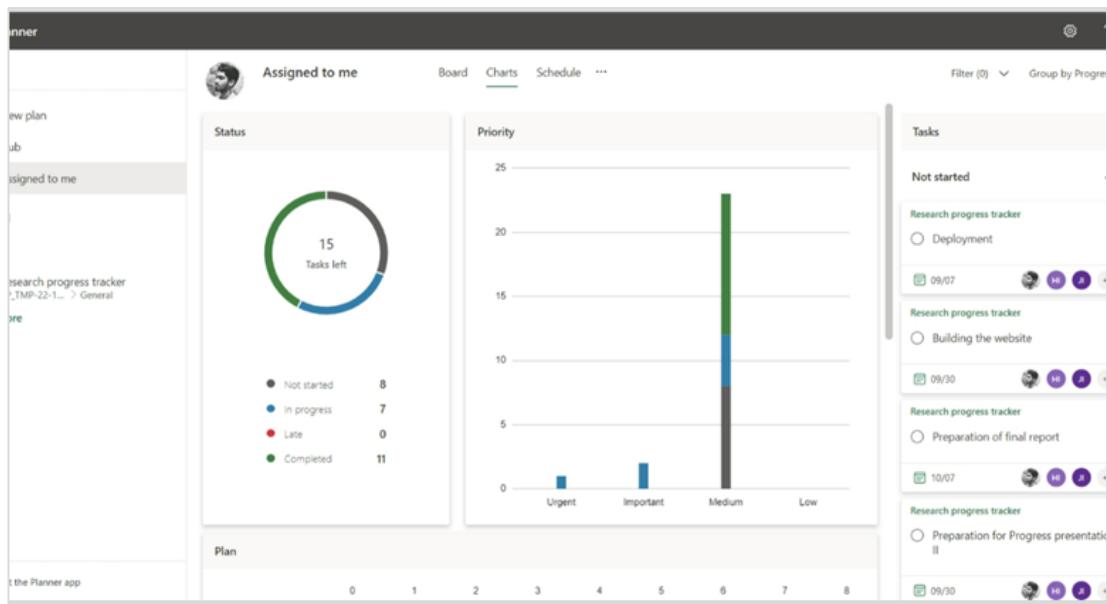


Figure 1.4. 4 Number of tasks assigned to IT19051208 along with priority

2. GIT LOGS

2.1 GitLab Branch

The following screenshot shows the Gitlab branches.

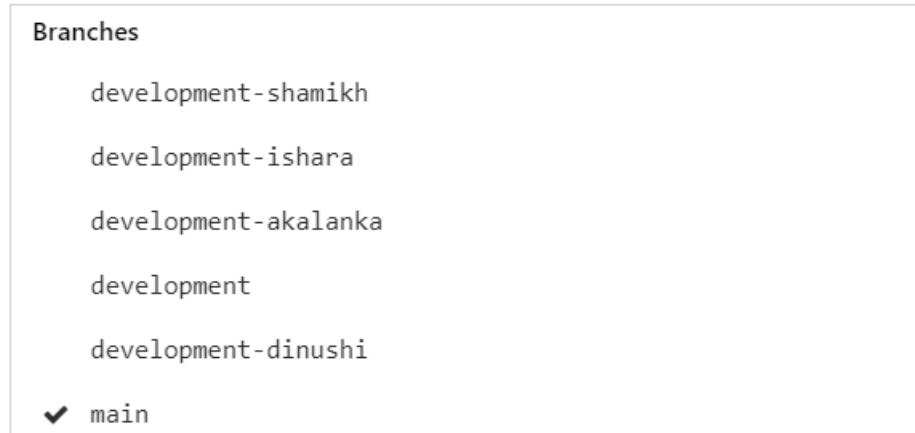


Figure 2.1. 1 GitLab branches created

2.2 GitLab Contributions

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

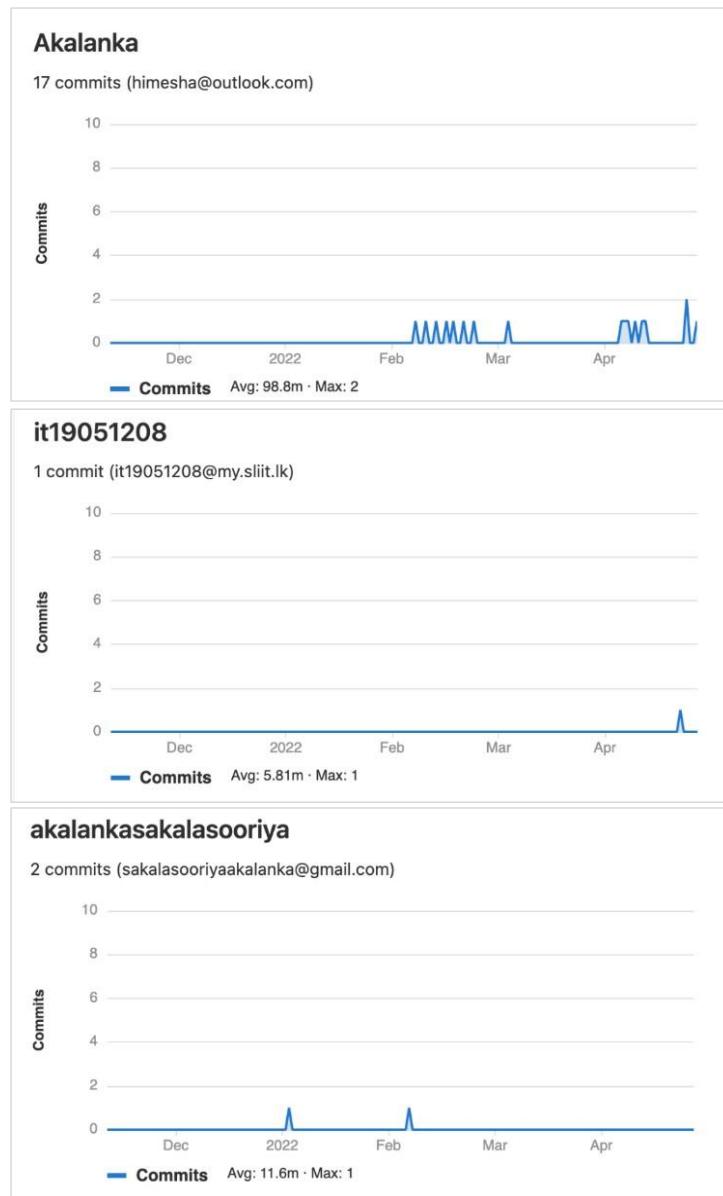


Figure 2.2. 1. GitLab commits overtime

The screenshot shows a GitLab user profile for 'Sakalasooriya S.A.H.A' (@IT19051208). The profile includes a photo, a bio section, and a timeline of recent activity. The activity log lists 18 commits from the 'development-akalanka' branch, spanning from 23 hours ago to 3 months ago. Each commit details a push to the branch, a commit hash, and a brief description.

Commit	Date	Description
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 22541f94 - added file export	23 hours ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 ec92db19 - implemented siena cli	3 days ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 91a05a5f - temporary commit	3 days ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 87a5ee15 - change APIs to local files	5 days ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 75ed9358 - removed hard coded ids	2 weeks ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 1b79c380 - added files management API	2 weeks ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 ccdc5aa9 - added feature to save tagged word into DB	2 weeks ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 68f6b2af - Added pagination	3 weeks ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 13a1672b - Added manage entities functions	3 weeks ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 c3489378 - UI enhancement	3 weeks ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 0869a95b - Merge remote-tracking branch 'remotes/origin/development' into deve... ... and 23 more commits. Compare b345d358...0869a95b	1 month ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 b345d358 - updated database schema	1 month ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 8b472cdb - Added loading screen and updated MS icons	2 months ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 be15b56e - added entity selection ability	2 months ago	
Sakalasooriya S.A.H.A @IT19051208 Pushed to branch development-akalanka at 2022-056 / 2022-056 31021a35 - Added YML read and upload feature	2 months ago	

Figure 2.2. 2 GitLab recent activity

3. EMAILS

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

3.1 Supervision requesting and confirmation emails

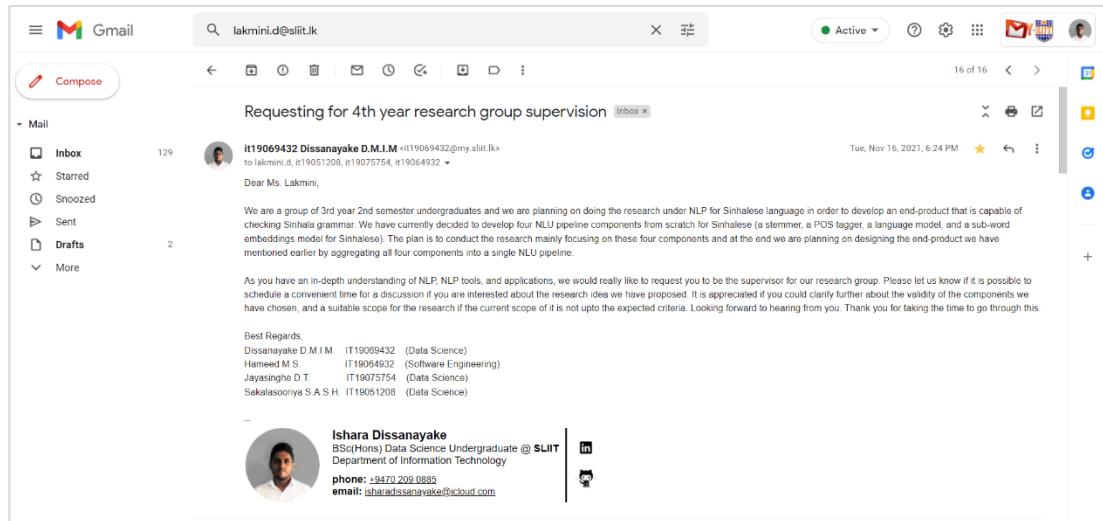


Figure 3.1. 2 Research supervision request



Figure 3.1. 1 Research project supervision confirmation

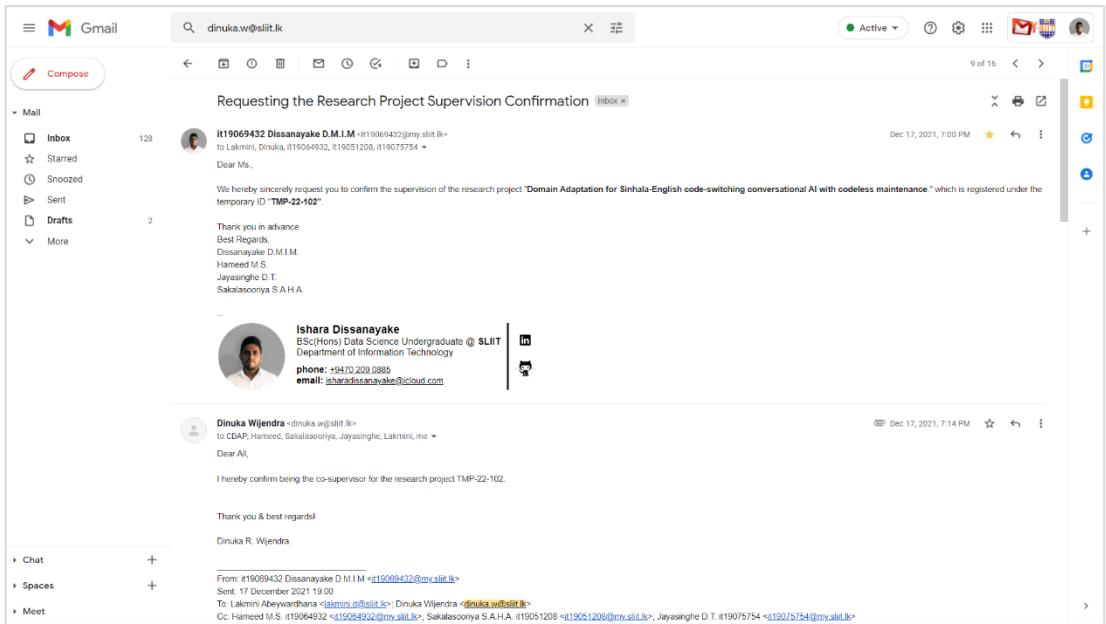


Figure 3.1. 3 Research project co-supervision request and response

3.2 Topic discussion meeting scheduling

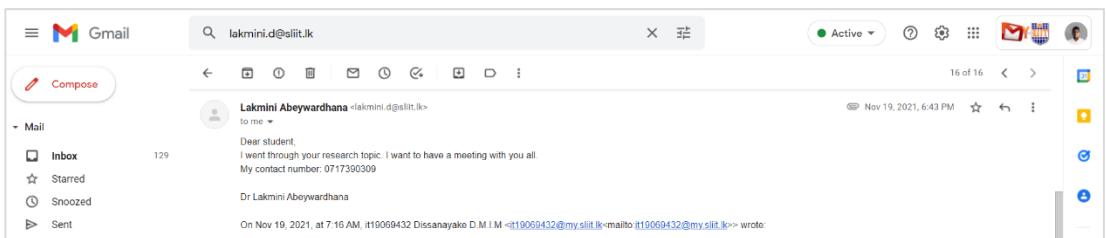


Figure 3.2. 1. Topic discussion meeting scheduling - I

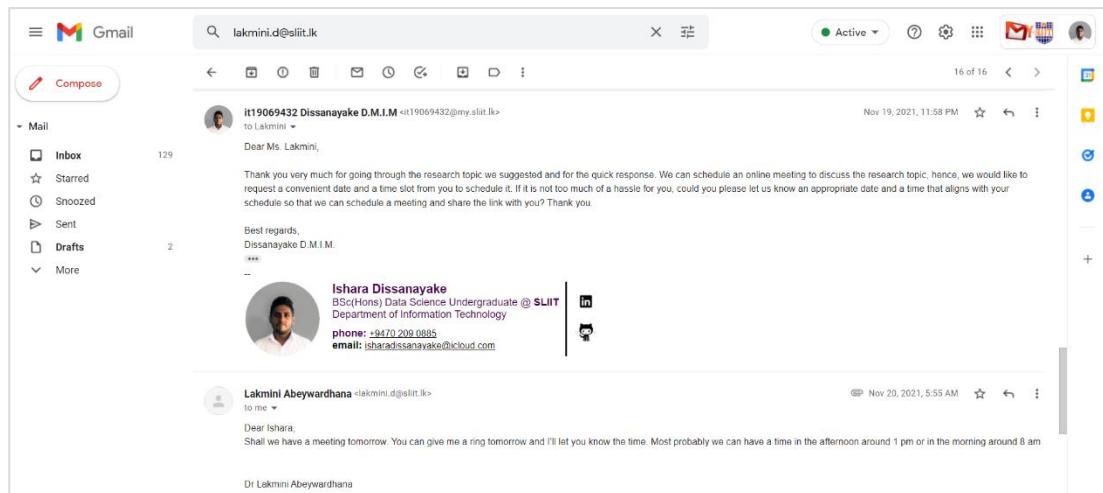


Figure 3.2. 2 Topic discussion meeting scheduling - II

3.3 Research proposal draft review requesting emails

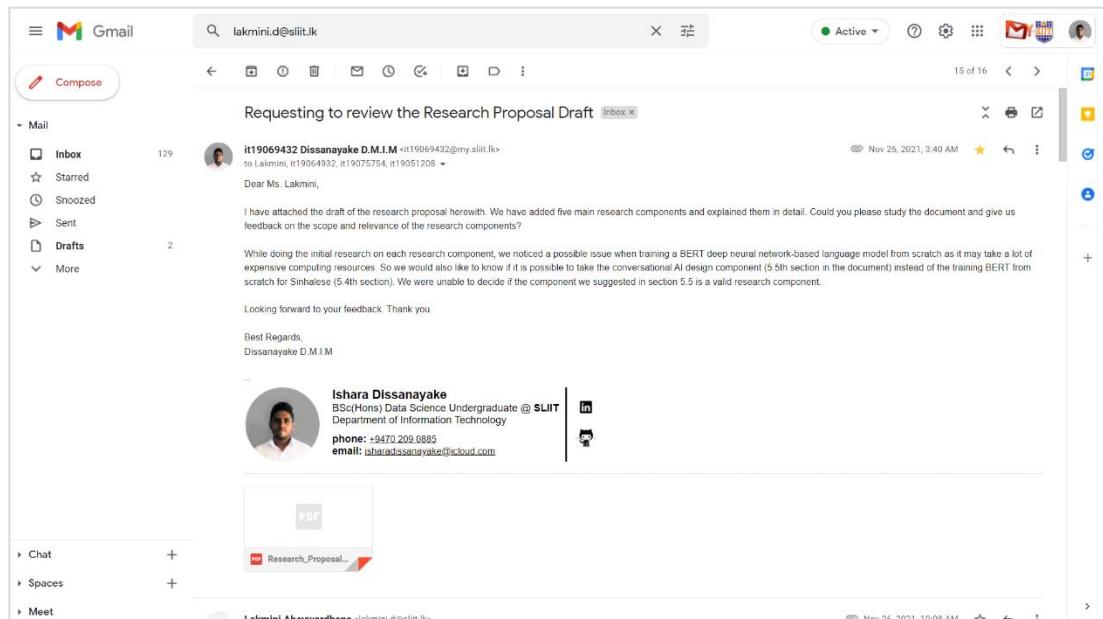


Figure 3.3. 1. Proposal drafts review request

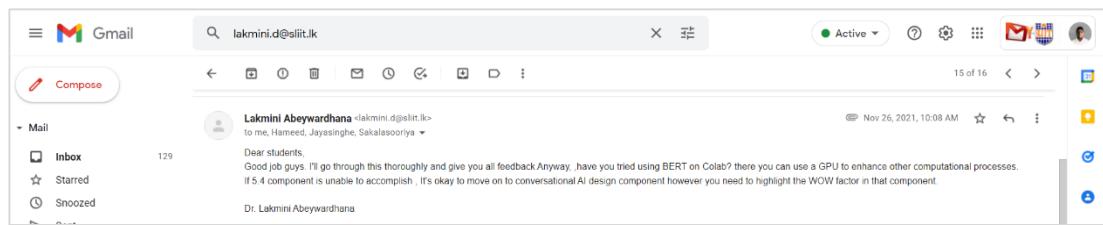


Figure 3.3. 2. Reply of the supervisor on proposal drafts review request

3.4 Progress discussion meeting scheduling

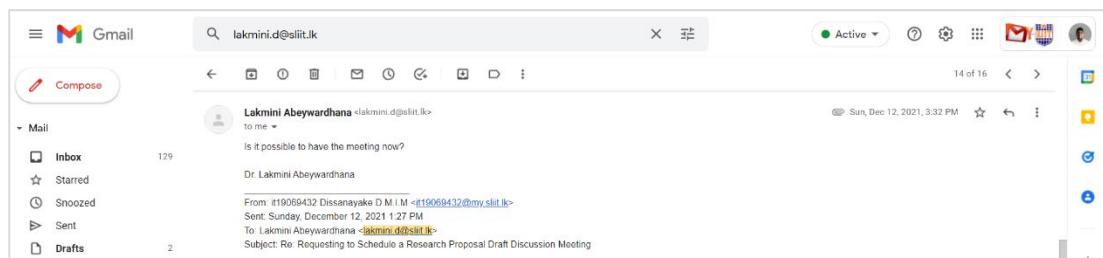


Figure 3.4. 1. Research progress discussion meeting request

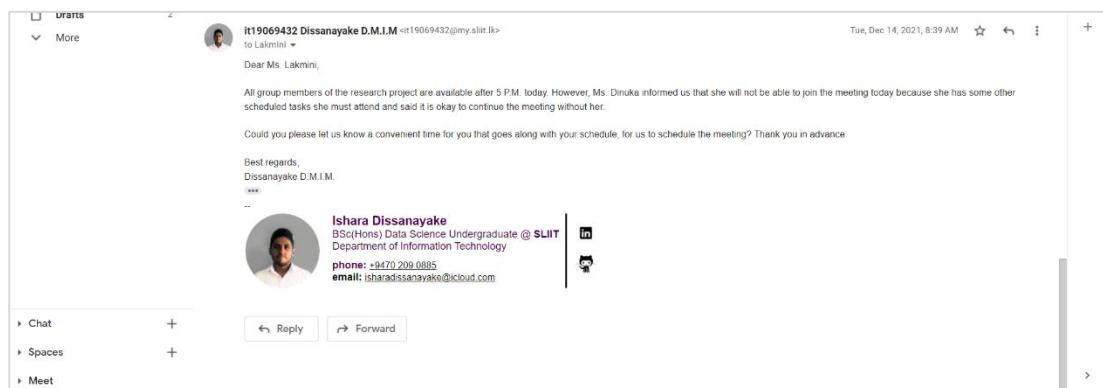


Figure 3.4. 2. Reply for the research progress discussion meeting request

3.5 Topic assessments form review request

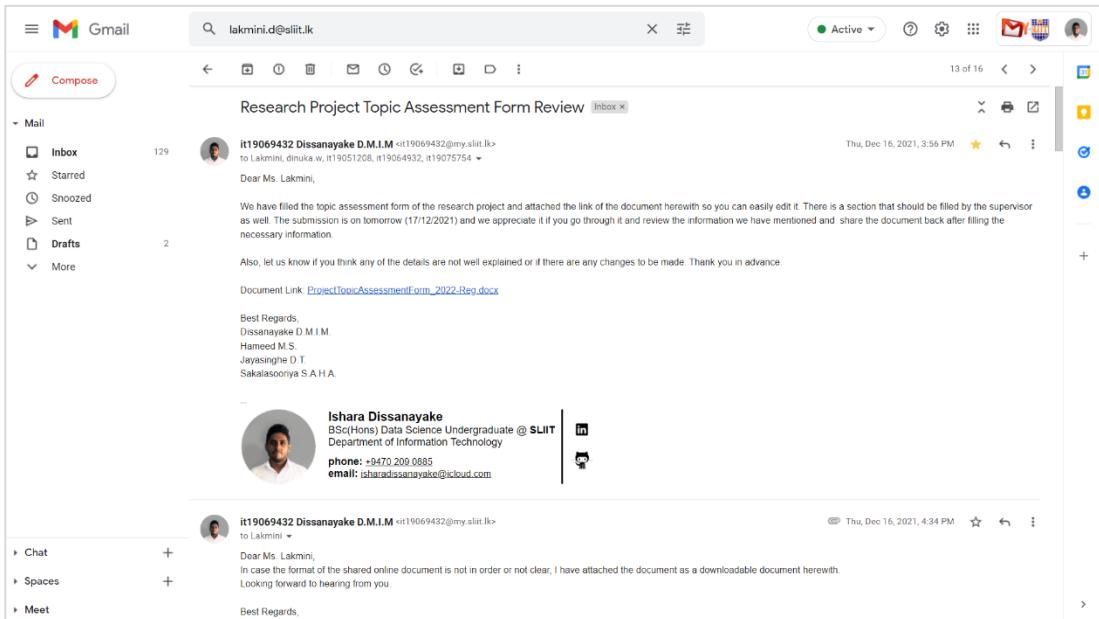


Figure 3.5. 1. Topic assessment form review request - I

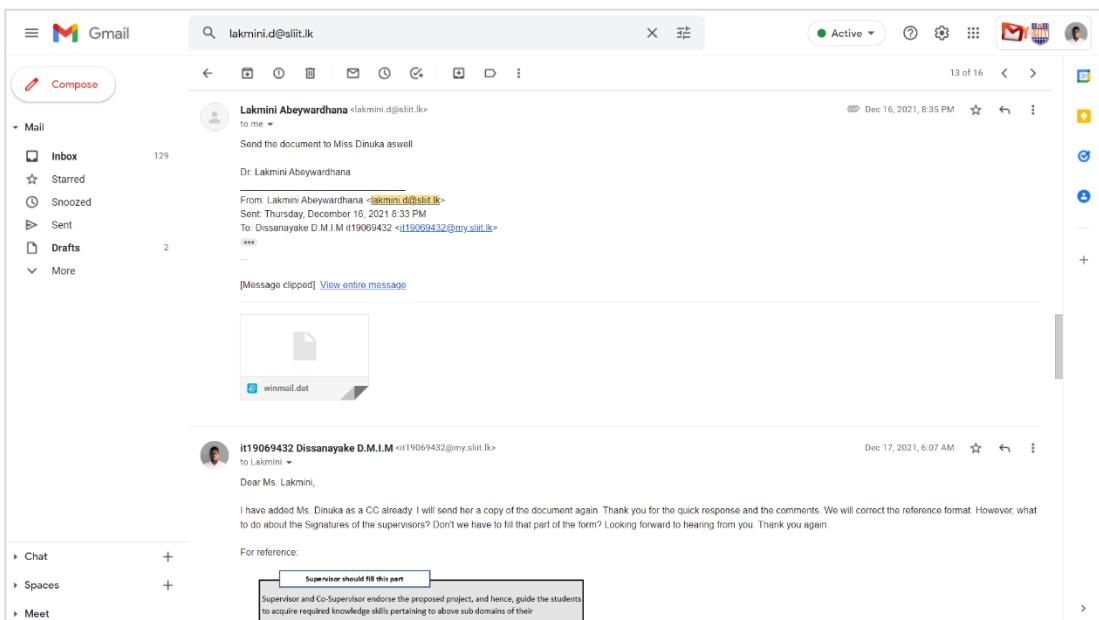


Figure 3.5. 2. Topic assessment form review -II

3.6 Research component changes review request

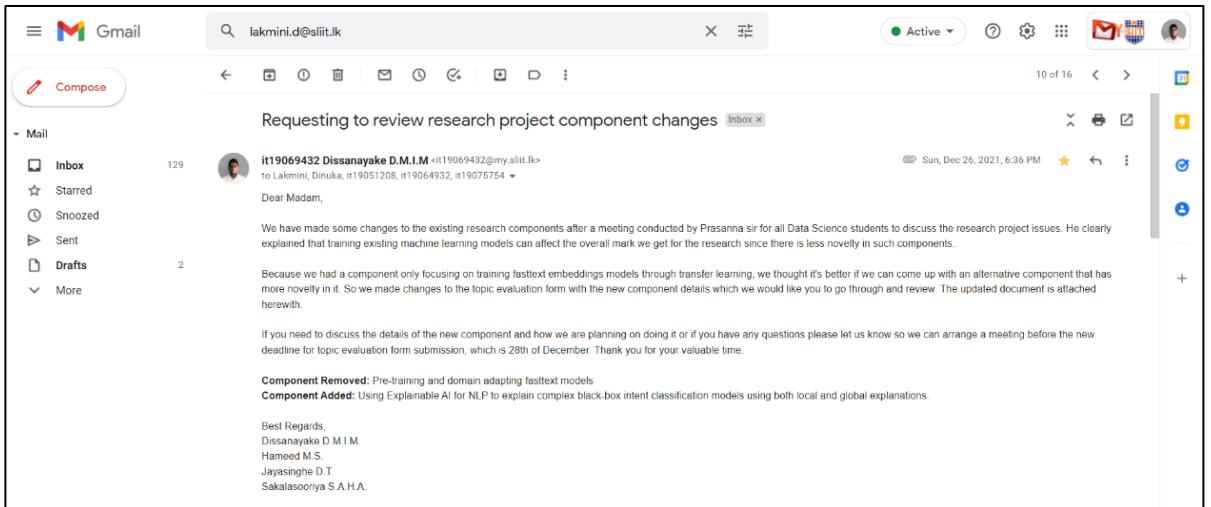


Figure 3.6. 1. Research component/component objective changes review request

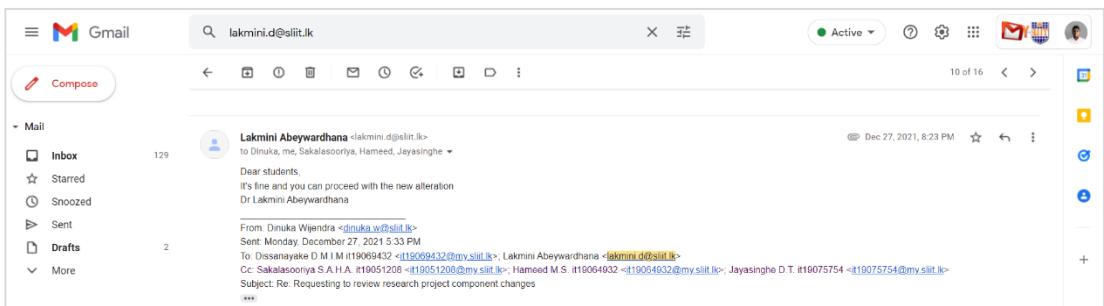


Figure 3.6. 2. Component changes approval of the supervisor

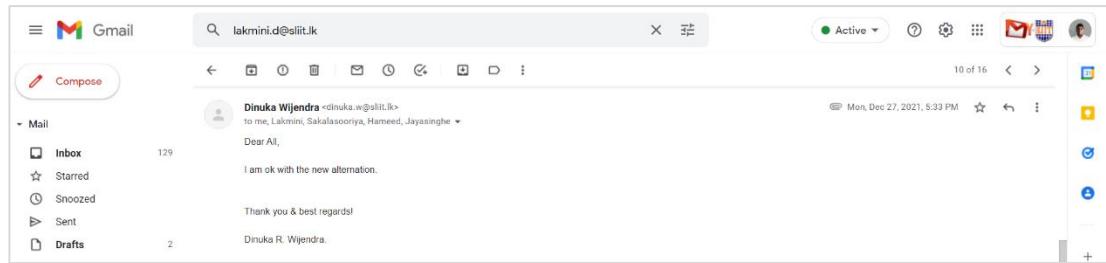


Figure 3.6. 3. Component changes approval of the co-supervisor

3.7 Topic changes review request after panel evaluation was done

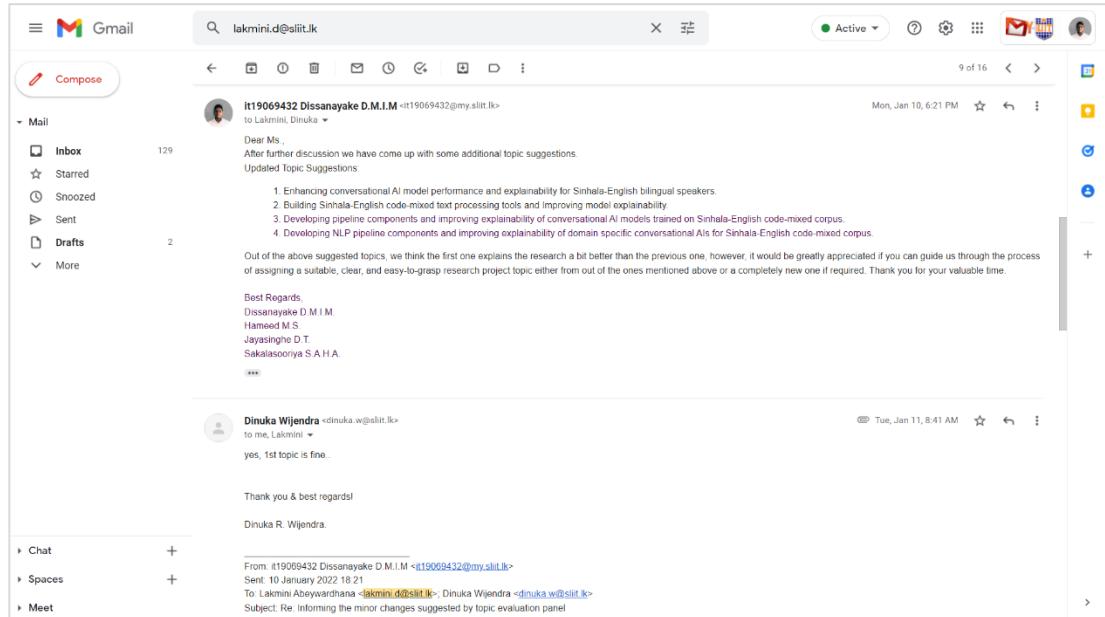


Figure 3.7. 1. Topics suggested by the members due to the suggestion made by the panel

3.8 Individual project proposal documents review request

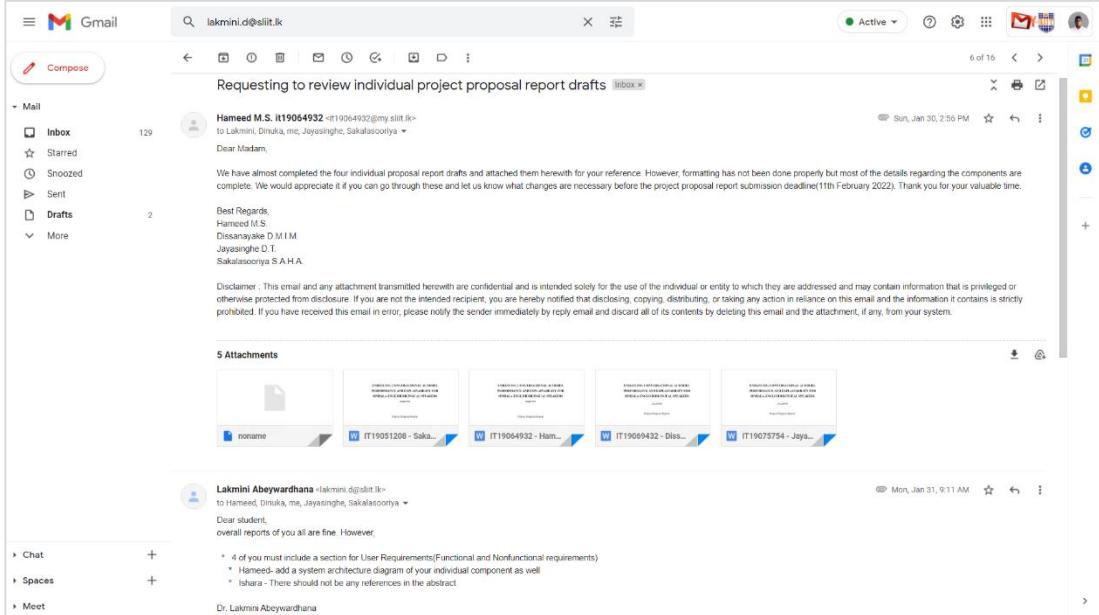


Figure 3.8. 1 Individual proposal draft review request

3.9 Sharing the updated proposal presentation slides deck

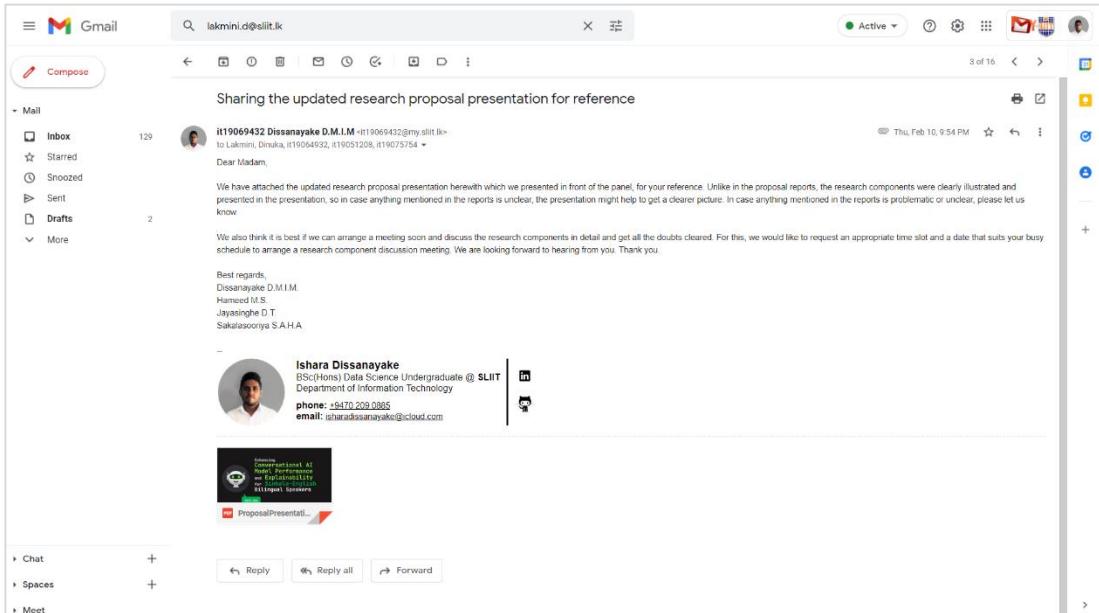


Figure 3.9. 1. Sharing the updated proposal slides deck

3.10 Research progress discussion meeting before progress presentation – I

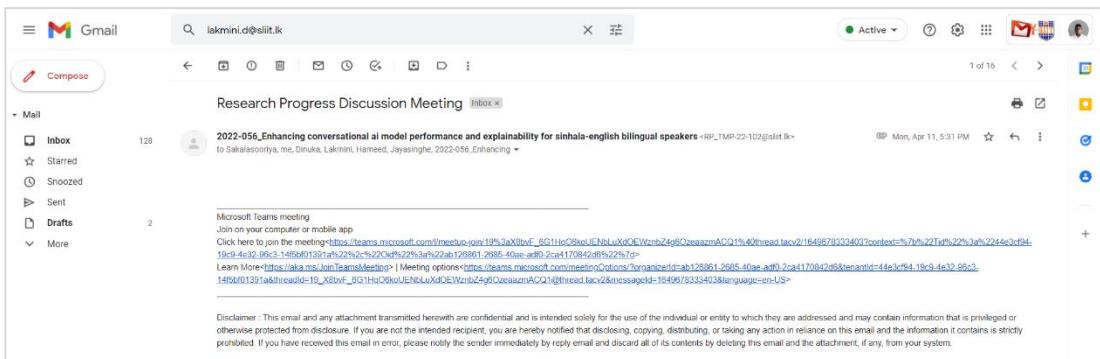


Figure 3.10. 1 50% progress discussion meeting scheduling

4. GANTT CHART COMPARISON

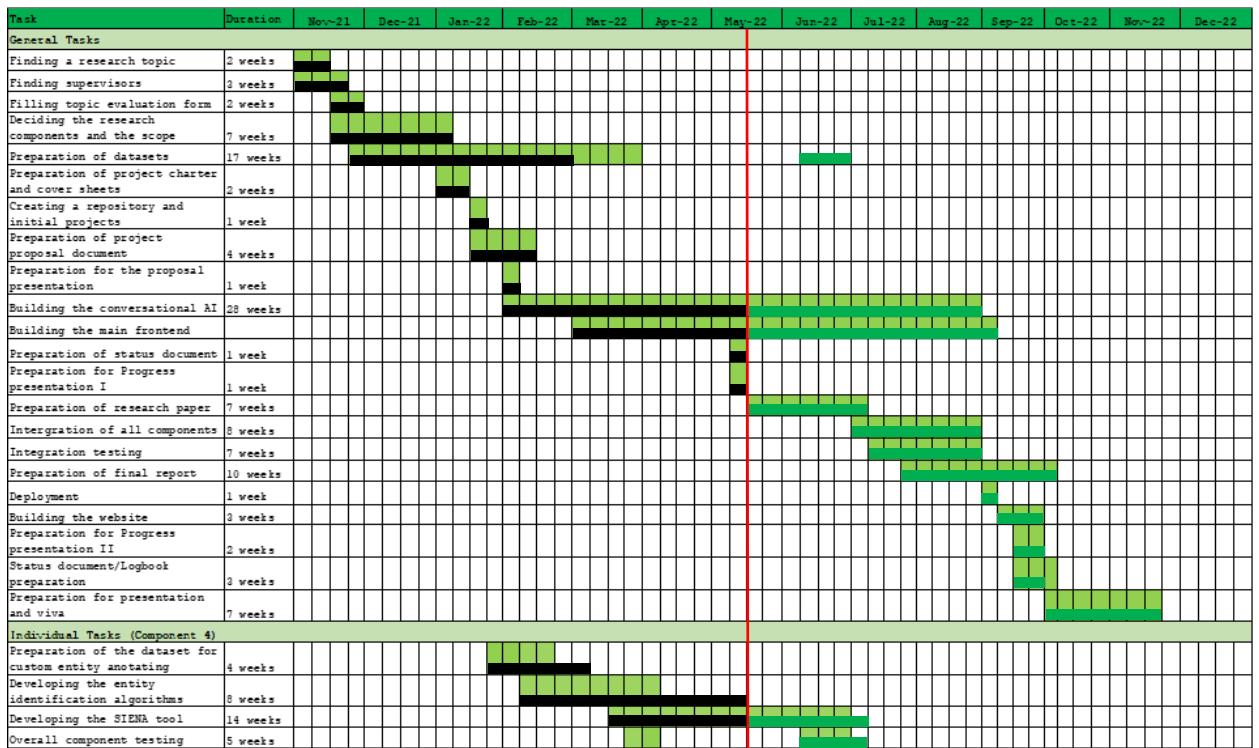


Figure 4. 1. Predicted Gantt chart vs actual completion comparison

Legend: Predicted Actual Remaining

Error! Reference source not found. breaks down all tasks of this individual research component under 4 main tasks. Deployment is done at the end by integrating all four research components.

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.

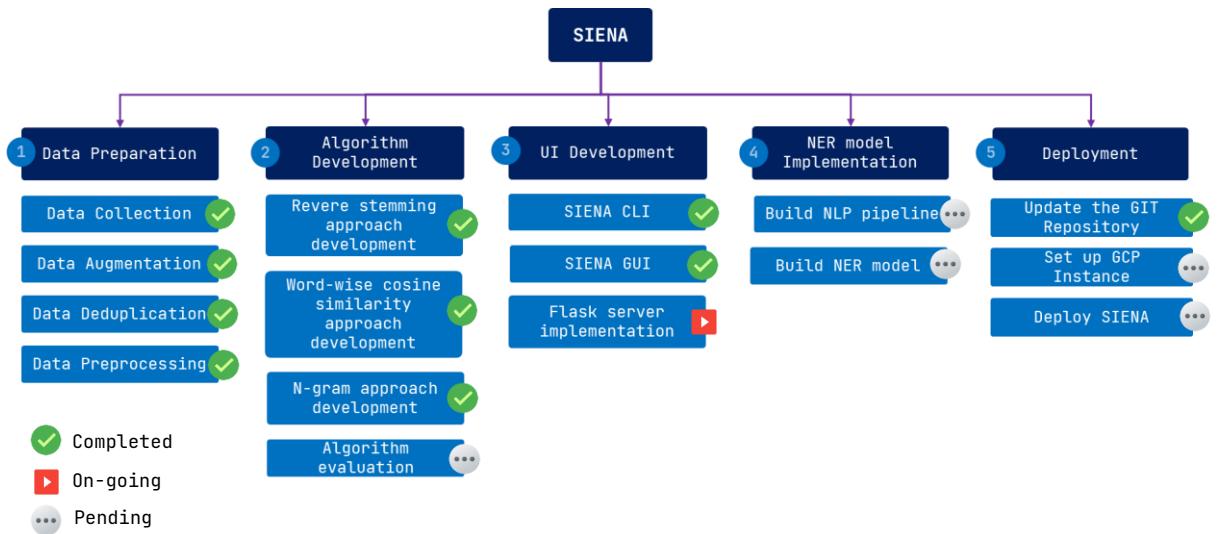


Figure 5.1. Work breakdown structure, completed, on-going and pending task indications