

ONLINE LEARNING PLATFORM FOR HEARING IMPAIRED PEOPLE

Project ID: 2022_59

Logbook

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November 2022

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1. Week 1 – January 10 to January 16

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Research on Sri Lankan Sign Language.• Project Charter Submission

2. Week 2 – January 17 to January 23

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Literature survey on learning platforms developed for hearing impaired around the world.• Working on proposal document draft version.

3. Week 3 – January 24 to January 30

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Proposal draft submission• Research on Sri Lankan sign language and its features.

4. Week 4 – January 31 to February 6

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Research on emotion detection using speech.• Prepare for proposal presentation.• Recording of proposal presentation videos for supervisor feedback.• Practice with group members

5. Week 5 – February 7 to February 13

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> • Background study on tools and technologies for emotion detection using speech. • Finalizing proposal document and submitting for supervisor feedback. • Submitted proposal document after supervisor feedback was received.

6. Week 6 – February 14 to February 20

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> • Setting up python environments and testing necessary tools to get familiarized with them.

7. Week 7 – February 21 to February 27

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> • Gathering data for model speech emotion recognition while researching training models for emotion detection and its features.

8. Week 8 – February 28 to 6 March

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Background study on tools and technologies for emotion detection using speech. Finalizing proposal document and submitting for supervisor feedback. Submitted proposal document after supervisor feedback was received.

9. Week 9 – March 7 to March 13

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Implemented first model based on research findings for emotion detection using speech. 57% Accuracy acquired from the first model.

10. Week 10 – March 14 to March 20

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Research on improving accuracy for trained models. Found usage of MLPC is better for emotion detection than other models when using MFCC features.

11. Week 11 – March 21 to March 27

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Implementation of MLPC model for emotion detection based on found details through research.• Fine-tuning already implemented pre processing codes.

12. Week 12 – March 28 to April 3

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Emotion detection implementation completed with an accuracy of 79% using MLPC.• Research started on converting text to Sri Lankan sign language (SSL).

13. Week 13 – April 4 to April 10

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Started text-to-SSL model implementation using NLP techniques based on research findings.• Due to a java path error while using Stanford parser implementation was halted to rectify the issue.

14. Week 14 – April 11 to April 17

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Java error solved.• Not much work due to Sinhala and Tamil New Year.

15. Week 15 – April 18 to April 24

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Finished Text to SSL model.• Started on combining two build models along with necessary pre-processing steps such as extracting transcription from YouTube video and extracting audio from the video.

16. Week 16 – April 25 to May 1

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">• Implementation update to the supervisor.• Made changes based on supervisor feedback.• Finished necessary work required for progress presentation 1.

17. Week 17 – May 2 to May 8

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Presented demo to the supervisor required for progress presentation 1. Started creating progress presentation slides. Finished creating Status document.

18. Week 18 – May 9 to May 15

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Submitted Status document 1 Progress presentation 1 was postponed due to crisis in the country. Started on further research on tuning the build models to improve accuracy and also on building an 3D avatar for output using blender.

19. Week 19 – May 16 to May 22

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Finalized the presentation for PP1. Recorded a presentation video along with other team members and submitted for supervisor feedback. Made changes based on supervisor feedback

20. Week 20 – May 23 to May 29

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> • Had progress presentation 1 and was told that emotion detection with the use of speech alone is not enough and was advised to research on using a combination of speech and text. • Had a discussion with supervisor and got advice on what should be done from this point on.

21. Week 21 – May 31 to June 5

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> • Planning component structure to adjust to changes suggested by the panel during PP1. • Research on combining text, speech, and facial expressions to identify emotions.

22. Week 22 – June 6 to June 12

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> • Started working on the research paper. • Research on text emotion analysis.

23. Week 23 – June 13 to June 19

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Worked on the research paper. No other major work due to final exams the following week.

24. Week 24 – June 20 to June 26

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> No project work due to semester final exams.

25. Week 25 – June 27 to July 3

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Research Paper submission for CDAP. Research on emotion detection using facial expressions.

26. Week 26 – July 4 to July 10

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Implementation of facial emotion detection model using deepface and decision tree algorithm. Identified that deepface library predicts emotion with an accuracy of 97%

27. Week 27 – July 11 to July 17

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Using information gathered during research identified a way to combine text and facial emotion detection models with speech emotion detection using a scoring system. Discussion with supervisor to update on current status.

28. Week 28 – July 18 to July 24

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Implementation of scoring algorithm based on dummy data and tested for efficiency.

29. Week 29 – July 25 to July 31

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Completed implementation of models for emotion detection using text and facial expressions

30. Week 30 – August 1 to August 7

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">Started working on research paper for ICAC 2022.Integrating all units to a single system after unit testing.

31. Week 31 – August 8 to August 14

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">Research paper for ICAC submitted to the supervisor for feedback.Completed Integration and moved on to testing the integrated testing before UI development.

32. Week 32 – August 15 to August 21

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">Discussion with supervisor to finalize research paper for ICAC 2022.UI development process started.

33. Week 33 – August 22 to August 28

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">Finalizing research paper for ICAC 2022 paper submission along with paper submission for ICTer 2022.UI Development with bug fixes

34. Week 34 – August 29 to September 4

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">Started working on the final report draft version.UI development.

35. Week 35 – September 5 to September 11

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">Final Report Draft version submitted.Completed UI development and started integrating the backend with the developed frontend.

36. Week 36 – September 12 to September 18

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">Completed UI integration with the backend.Started building the video library for output.Minor changes to the Final report draft.

37. Week 37 – September 19 to September 25

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">Completed component integration and moved onto the testing phase.Some bugs were identified within the component.

38. Week 38 – September 26 to October 2

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">Bug fixes and finalizing components for PP2.Integrating system with other components for PP3.Testing system after integration.Created Research poster.

39. Week 39 – October 3 to October 9

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none">No project work due to mid exams

40. Week 40 – October 10 to October 16

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> • Had PP2 and positive feedback received. • Minor changes were suggested related to the useability of the system. • Advised to increase the data library. • Received acceptance notification for ICAC 2022.

41. Week 41 – October 17 to October 23

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> • Worked on suggestions made by the panel during PP2. • Made changes to research paper for ICAC camera ready submission based on reviewer feedback.

42. Week 42 – October 24 to October 30

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> • Implemented the database for the component. • Made changes to research paper for ICAC camera ready submission based on reviewer feedback. • Submitted ICAC camera ready submission.

43. Week 43 – October 31 to November 6

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Received acceptance notification for ICTer 2022. Started on changes for ICTer paper based on reviewer feedback for camera ready submission. Withdrew from ICAC 2022.

44. Week 44 -November 7 to November 13

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Finished final implementations and finalized all documents for final submission. Created research website and submitted. Updated gitlab for final presentation and viva.

45. Week 45 – November 14 to November 20

Component	Person Responsible	Work Done
YouTube Video Captioning Module	M.W.S.S.M.T.M.B Munasinghe	<ul style="list-style-type: none"> Final Viva and Presentation