Sri Lanka Institute of Information Technology

PROJECT REGISTRATION FORM

(This form should be completed and uploaded to the Cloud space on or before 23rd August 2021)

The purpose of this form is to allow final year students of the B.Sc. (Hon) degree program to enlist in the final year project group. Enlisting in a project entails specifying the project title and the details of four members in the group, the internal supervisor (compulsory), external supervisor (may be from the industry) and indicating a brief description of the project. The description of the project entered on this form will not be considered as the formal project proposal. It should however indicate the scope of the project and provide the main potential outcome.

PROJECT TITLE (As per the accepted topic assessment form)	"Presently" – A personal trainer app to self-train and improve presentation skills.
RESEARCH GROUP **(as per the Topic assessment Form)**	Human Computer Interaction
PROJECT NUMBER	TMP-2021_22-02 (will be assigned by the lecture in charge)

PROJECT GROUP MEMBER DETAILS: (Please start with group leader's details)

	STUDENT NAME	STUDENT NO.	CONTACT NO.	EMAIL ADDRESS
Format				
1	Shehara A.K.G.H	IT18205152	0769155923	it18205152@my.sliit.lk
2	Wanigasinghe N.T	IT18229912	0702052017	it18229912@my.sliit.lk
3	Wandana R.A.K	IT18227550	0710408347	it18227550@my.sliit.lk
4	Wedage C.V	IT17535090	0710127533	it17535090@my.sliit.lk

SUPERVISOR, CO_ SUPERVISOR Details

SUPERVISOR Name	CO-SUPERVISOR Name
Dr. Shyam Mehraaj	**Ms. Samanthi Eranga Siriwardene**
Signature	**Signature**
Appendix 1	Appendix 2
19/08/2021	**19/08/2021**
Date	**Date**

EXTERNAL SUPERVISOR Details (if any, may be from the industry)

Ms. Veerandi Kulasekara	Research Assistant	New Kandy Road, Malabe	0703157517	Appendix 3
Name	Affiliation	Contact Address	Contact Numbers	Signature/Date

ACCEPTANCE BY CDAP MEMBER (This part will be filled by the RP team)

Name	Signature	Date

PROJECT DETAILS

Brief Description of your Research Problem: (extract from the topic assessment form)

A presentation is a means of communication that can be adapted to various speaking situations, such as talking to a group, addressing a meeting, or briefing a team. The role of the presenter is to communicate with the audience and control the presentation. Delivering the speech with correct pronunciation and vocabulary, controlling emotions and body language, with creative presentation slides are key elements of a presentation.

However, due to English is not being the first Language in Sri Lanka, people tend to do more pronunciation and vocabulary errors when they speak. We need a method to check the performance before doing the actual presentation. So, for that getting someone's help is the most common way people used it. But this is not efficient as this takes other persons' time and this is varying from one person to another as their expertise is different. So far to evaluate the speakers' pronunciation a method is used which can quickly recognize what the speakers say and transcribe it into the text. [1]

Keeping the facial expressions and the emotions confident during the presentation is one of the major things that should be considered when delivering a speech. For this need to use a platform to monitor the emotions and body language of the speakers which leads to a successful speech. [2]
Using graphics, images, and facts in a proper way to the presentation slides is very important to make the presentation more interesting to the audience. There is a method to check the aesthetics of the slides. Among those, image classification is considered as the fundamental problem and forms the basis for other computer vision problems.[3]

[1] M. Li, M. Han, Z. Chen, Y. Mo, X. Chen, and X. Liu, "Improving English Pronunciation Via Automatic Speech Recognition Technology," 2017 International Symposium on Educational Technology (ISET), 2017, pp. 224-228, doi: 10.1109/ISET.2017.58.

[2] L. Matsane, A. Jadhav and R. Ajoodha, "The use of Automatic Speech Recognition in Education for Identifying Attitudes of the Speakers," 2020 IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE), 2020, pp. 1-7, doi: 10.1109/CSDE50874.2020.9411528.

[3] F. Sultana, A. Sufian and P. Dutta, "Advancements in Image Classification using Convolutional Neural Network," 2018 Fourth International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN), 2018, pp. 122-129, doi: 10.1109/ICRCICN.2018.8718718.

Description of the Solution: (extract from the topic assessment form)

The proposed system comprises a mobile responsive web application that helps to improve the presentation skills of a presenter. First and foremost, the presenter must upload the video or audio and the presentation slides to the proposed system. According to the presenters' preference, he/she can upload either the video or the audio clip of the presentation to the system. The system facilitates the presenter to check the presentation skills with or without uploading the presentation slides.

Using the uploaded audio clip, firstly the system will check for the pronunciation mistakes done by the presenter. Then the system will check the vocabulary errors and finally will provide feedback, and a rating for the performance. The proposed system will provide the facility to detect the emotions and the body language of the presenter when they upload the video of the presentation. The system will also provide feedback and a rating for the presenter's performance. Other than that, the proposed system can detect emotions, tonality, prosody, and voice qualities match with the type of presentation or the speech only by using the uploaded audio clip and it will also provide feedback and the rating for the performance.

Moreover, the system will provide the functionality to upload the presentation slides to the system. The system will check the presentations' slides quality by using text and image classification techniques. By analyzing the slides, the system will detect the grammar, attractiveness using color themes, etc. This will also provide feedback and a rating for the quality of the slides. The proposed system is capable to work even without the uploaded presentation slides.

Main expected outcomes of the project: (extract from the topic assessment form)

Main Objective: To develop a Mobile Responsive Web Application that would help presenters to prepare beforehand for the presentations to deliver a successful speech to the audience.

Sub Objective 1: When delivering a presentation to provide a user with incorrect pronunciation and vocabulary mistakes and to suggest the user what emotions and enhancements used to present the story using video analysis.

Sub Objective 2: To suggest user, the match or mismatch between topic tone and emotions used to present the story using audio analysis.

Sub Objective 3: To check the grammar and spellings in presentation slides

Sub Objective 4: To suggest the user how to attract audience effectively by analyzing slides for accuracy of content and aesthetics using computer vision and rules of design-best-practices.

WORKLOAD ALLOCATION (**extract from the topic assessment form after correcting the suggestions given by the topic assessment panel.**)

(Please provide a brief description about the workload allocation)

MEMBER 1

The proposed system can suggest the wrong pronunciations and vocabulary mistakes done by the presenters when they upload the audio file, video file, or presentation slide. If a video clip is uploaded, the proposed system, will extract the audio clip from it and analyze it separately for the possible wrong pronunciation and possible vocabulary errors. After the analysis is completed, the system will give a rating and feedback on the performance of the presenter which is useful when doing the actual presentation or the speech by improving their skills. The audio analysis and checking for pronunciation errors will be done using Natural Language Processing (NLP). At end of the day, anyone who needs assistance when practicing a speech or a presentation beforehand will get help from the system for successful delivery of the speech.

MEMBER 2

When the presenter uploads the video clip to the system, the proposed system has the functionality to extract the audio clip form it. With using the extracted audio clip of the presenter, the system will check the emotions, tonality, and prosody. This will be done using the techniques of Natural Language Processing (NLP). After analyzing the audio clip, the system will provide feedback and a rating for the performance of the presenter.

MEMBER 3

The presenter can upload the video to the proposed mobile responsive web application. From the system, only the video clip will be extracted from the uploaded video. Then the system will identify presenters' emotions, body language, and analyze those emotions separately in the video using video analysis and emotion analysis using Computer Vision. At the end of the process, the proposed system will give a rating and feedback using Machine Learning. This rating and feedback can help presenters to get an idea about their presentation skills. By getting feedback on the speech can improve how to stable their emotions while doing the presentation.

MEMBER 4

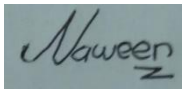
By analyzing the uploaded presentation slides, the system will detect the accuracy and attractiveness using text, color themes, etc. This will be done using computer vision and Natural Language Processing (NLP) techniques. This will help to design a more attractive and more accurate set of slides for the final presentation. With the feedback and the rating given by the system

by analyzing the uploaded slides, the presenter can improve the quality of the presentation aesthetically.

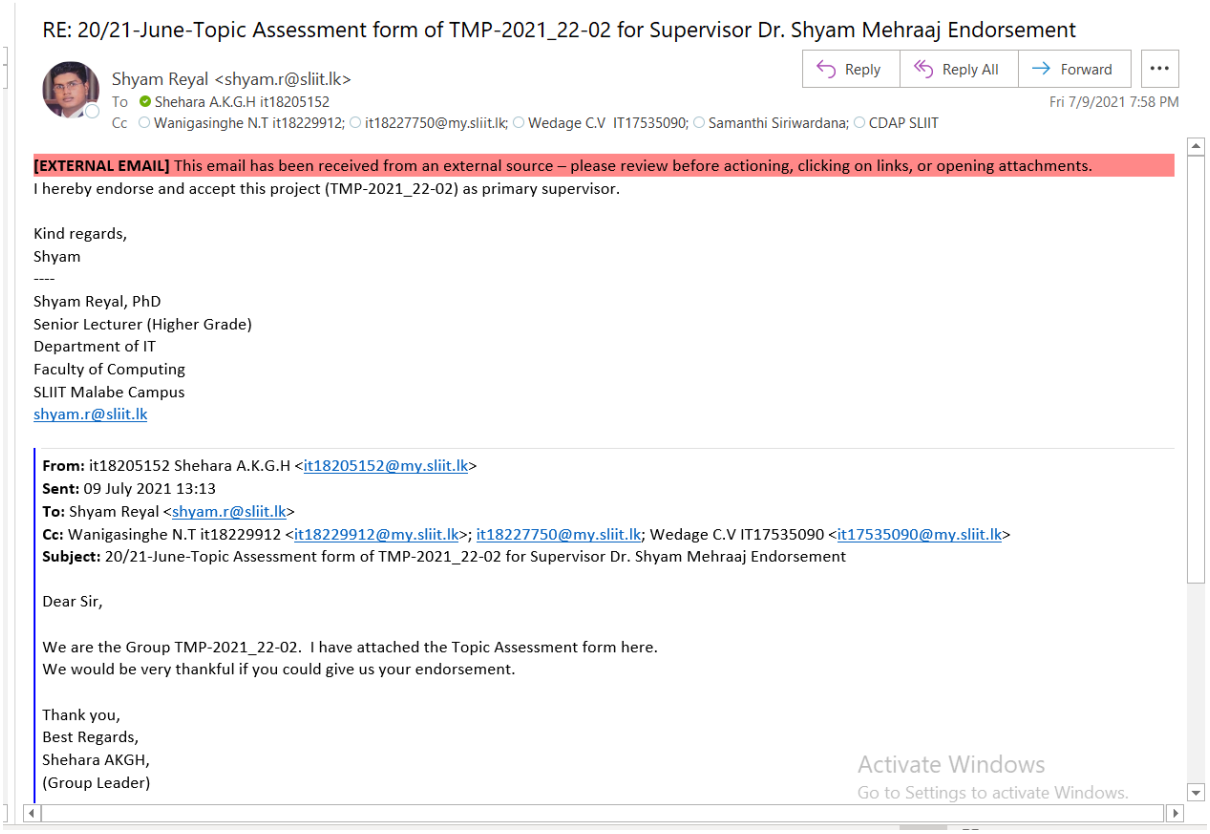
DECLARATION (Students should add the Digital Signature)

"We declare that the project would involve material prepared by the Group members and that it would not fully or partially incorporate any material prepared by other persons for a fee or free of charge or that it would include material previously submitted by a candidate for a Degree or Diploma in any other University or Institute of Higher Learning and that, to the best of our knowledge and belief, it would not incorporate any material previously published or written by another person in relation to another project except with prior written approval from the supervisor and/or the coordinator of such project and that such unauthorized reproductions will construe offences punishable under the SLIIT Regulations.

We are aware, that if we are found guilty for the above-mentioned offences or any project related plagiarism, the SLIIT has right to suspend the project at any time and or to suspend us from the examination and or from the Institution for minimum period of one year".

	STUDENT NAME	**STUDENT NO.**	**Signature**
1	Shehara A.K.G.H	IT18205152	
2	Wanigasinghe N.T	IT18229912	
3	Wandana R.A.K	IT18227550	
4	Wedage C.V	IT17535090	

Appendix 01



RE: 20/21-June-Topic Assessment form of TMP-2021_22-02 for Supervisor Dr. Shyam Mehraaj Endorsement

Shyam Reyal <shyam.r@sliit.lk>
To Shehara A.K.G.H it18205152
Cc Wanigasinghe N.T it18229912; it18227750@my.sliit.lk; Wedage C.V IT17535090; Samanthi Siriwardana; CDAP SLIIT

Reply | Reply All | Forward | ...

Fri 7/9/2021 7:58 PM

[EXTERNAL EMAIL] This email has been received from an external source – please review before actioning, clicking on links, or opening attachments.
I hereby endorse and accept this project (TMP-2021_22-02) as primary supervisor.

Kind regards,
Shyam

Shyam Reyal, PhD
Senior Lecturer (Higher Grade)
Department of IT
Faculty of Computing
SLIIT Malabe Campus
shyam.r@sliit.lk

From: it18205152 Shehara A.K.G.H <it18205152@my.sliit.lk>
Sent: 09 July 2021 13:13
To: Shyam Reyal <shyam.r@sliit.lk>
Cc: Wanigasinghe N.T it18229912 <it18229912@my.sliit.lk>; it18227750@my.sliit.lk; Wedage C.V IT17535090 <it17535090@my.sliit.lk>
Subject: 20/21-June-Topic Assessment form of TMP-2021_22-02 for Supervisor Dr. Shyam Mehraaj Endorsement

Dear Sir,

We are the Group TMP-2021_22-02. I have attached the Topic Assessment form here.
We would be very thankful if you could give us your endorsement.

Thank you,
Best Regards,
Shehara AKGH,
(Group Leader)

Activate Windows
Go to Settings to activate Windows.

Appendix 02

On Fri, Jul 9, 2021 at 1:16 PM it18205152 Shehara A.K.G.H <it18205152@my.sliit.lk> wrote:

> Dear Madam,
>
> We are the Group TMP-2021_22-02. I have attached the Topic Assessment form here.
> We would be very thankful if you could give us your endorsement.
>
> Thank you,
> Best Regards,
> Shehara AKGH,
> (Group Leader)

Disclaimer : This email and any attachment transmitted herewith are confidential and is intended solely for the use of the individual or entity to which they are addressed and may contain information that is privileged or otherwise protected from disclosure. If you are not the intended recipient, you are hereby notified that disclosing, copying, distributing, or taking any action in reliance on this email and the information it contains is strictly prohibited. If you have received this email in error, please notify the sender immediately by reply email and discard all of its contents by deleting this email and the attachment, if any, from your system.

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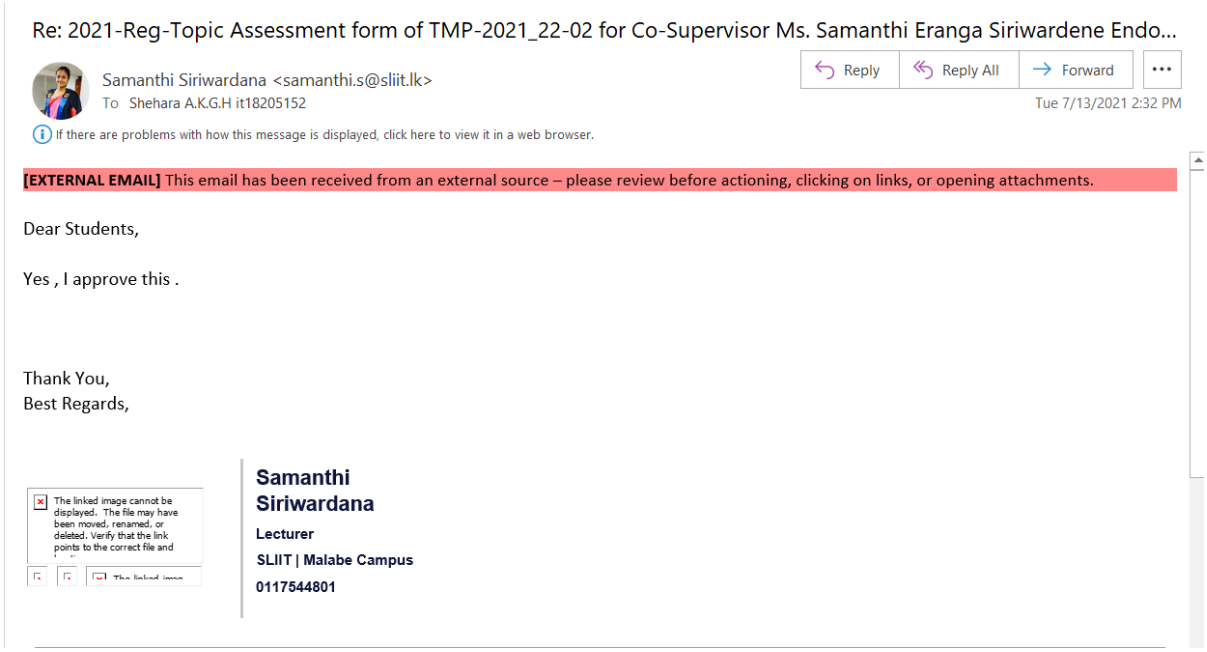


Re: 2021-Reg-Topic Assessment form of TMP-2021_22-02 for Co-Supervisor Ms. Samanthi Eranga Siriwardene Endo...

Reply | Reply All | Forward

Samanthi Siriwardana <samanthi.s@sliit.lk>
To Shehara A.K.G.H it18205152

Tue 7/13/2021 2:32 PM

If there are problems with how this message is displayed, click here to view it in a web browser.

[EXTERNAL EMAIL] This email has been received from an external source – please review before actioning, clicking on links, or opening attachments.

Dear Students,

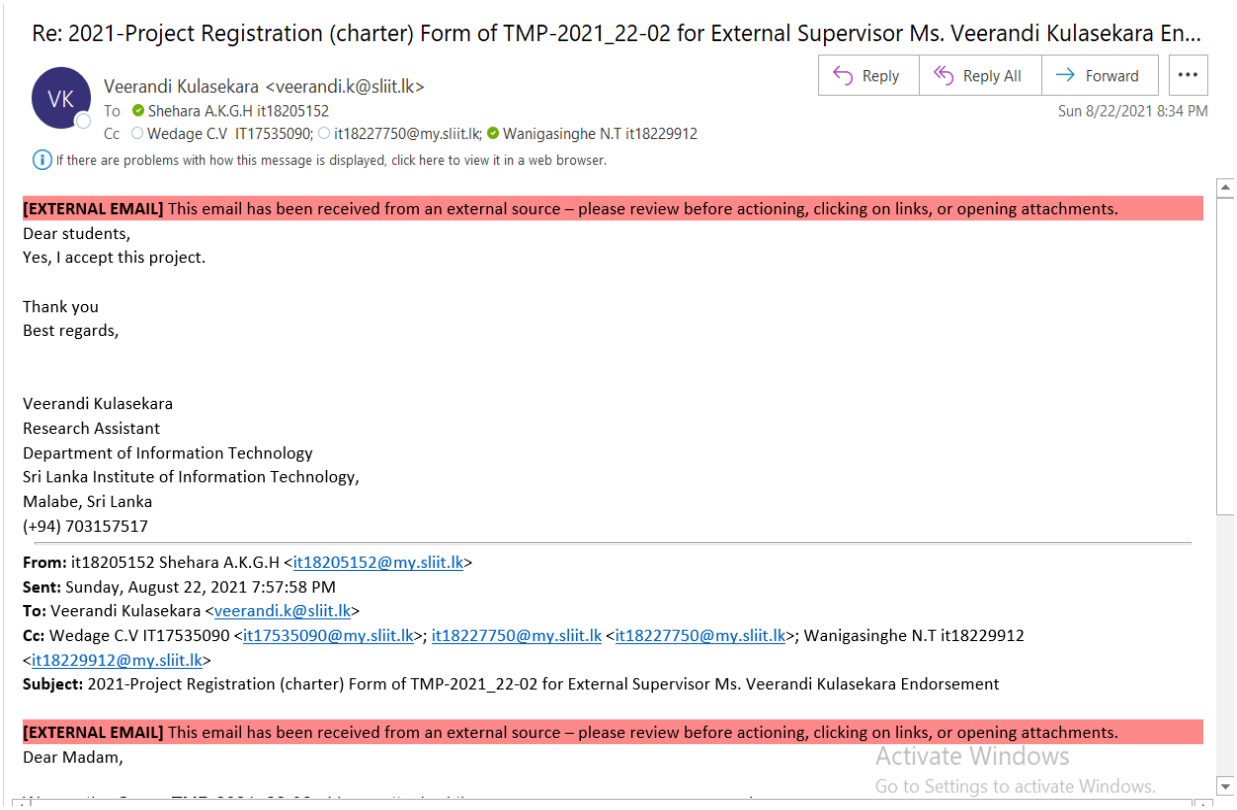
Yes , I approve this .

Thank You,
Best Regards,

The linked image cannot be displayed. The file may have been moved, renamed, or deleted. Verify that the link points to the correct file and

Samanthi Siriwardana
Lecturer
SLIIT | Malabe Campus
0117544801

Appendix 03



Re: 2021-Project Registration (charter) Form of TMP-2021_22-02 for External Supervisor Ms. Veerandi Kulasekara En...

Reply | Reply All | Forward

VK

Veerandi Kulasekara <veerandi.k@sliit.lk>
To Shehara A.K.G.H it18205152
Cc Wedage C.V IT17535090; it18227750@my.sliit.lk; Wanigasinghe N.T it18229912

Sun 8/22/2021 8:34 PM

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[EXTERNAL EMAIL] This email has been received from an external source – please review before actioning, clicking on links, or opening attachments.

Dear students,
Yes, I accept this project.

Thank you
Best regards,

Veerandi Kulasekara
Research Assistant
Department of Information Technology
Sri Lanka Institute of Information Technology,
Malabe, Sri Lanka
(+94) 703157517

From: it18205152 Shehara A.K.G.H <it18205152@my.sliit.lk>
Sent: Sunday, August 22, 2021 7:57:58 PM
To: Veerandi Kulasekara <veerandi.k@sliit.lk>
Cc: Wedage C.V IT17535090 <it17535090@my.sliit.lk>; it18227750@my.sliit.lk <it18227750@my.sliit.lk>; Wanigasinghe N.T it18229912 <it18229912@my.sliit.lk>
Subject: 2021-Project Registration (charter) Form of TMP-2021_22-02 for External Supervisor Ms. Veerandi Kulasekara Endorsement

[EXTERNAL EMAIL] This email has been received from an external source – please review before actioning, clicking on links, or opening attachments.

Dear Madam,

Activate Windows
Go to Settings to activate Windows.