



Senior Design Project
Speaking System for Mute And Deaf People

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Faculty Advisor:

Dr. Riasat Khan

Assistant Professor

ECE Department

Fall, 2021

LETTER OF TRANSMITAL

February, 2022

To

Dr. Mohammad Rezaul Bari

Chairman,

Department of Electrical and Computer Engineering

North South University, Dhaka

Subject: **Submission of Capstone Project Report on “Speaking System for Mute And Deaf People”**

Dear Sir,

With due respect, we would like to submit our **Capstone Project Report on “Speaking System for Mute And Deaf People”** as a part of our BSc program. The report deals with an Intelligent Sign Language Recognition System for Mute and Deaf People. This project was very much valuable to us as it helped us gain experience from practical field and apply in real life. We tried to the maximum competence to meet all the dimensions required from this report.

We will be highly obliged if you kindly receive this report and provide your valuable judgment. It would be our immense pleasure if you find this report useful and informative to have an apparent perspective on the issue.

Sincerely Yours,

.....
Atik Shahariar Patwary
ECE Department
North South University, Bangladesh

.....
Zaohar Zunaid
ECE Department
North South University, Bangladesh

.....
Asmany Akter Sornaly
ECE Department
North South University, Bangladesh

APPROVAL

Atik Shahariar Patwary (ID # 15), Zaohar Zunaid (ID # 15) and Asmany Akter Sornaly (ID # 15) from Electrical and Computer Engineering Department of North South University, have worked on the Senior Design Project titled “Speaking System for Mute And Deaf People” under the supervision of Dr. Riasat Khan partial fulfillment of the requirement for the degree of Bachelors of Science in Engineering and has been accepted as satisfactory.

Supervisor’s Signature

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Dr. Riasat Khan

Assistant Professor

Department of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh.

Chairman’s Signature

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Dr. Mohammad Rezaul Bari

Associate Professor

Department of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh.

DECLARATION

This is to certify that this Project is our original work. No part of this work has been submitted elsewhere partially or fully for the award of any other degree or diploma. Any material reproduced in this project has been properly acknowledged.

Students' names & Signatures

1. Atik Shahariar Patwary

2. Zaohar Zunaid

3. Asmany Akter Sornaly

ACKNOWLEDGEMENTS

By kindness of the Almighty we have successfully completed our capstone senior design project entitled “Speaking System for Mute And Deaf People”

Our deep gratitude goes first to my faculty advisor Dr. Riasat Khan, who expertly guided us in our senior design project throughout the whole CSE/EEE499A and CSE/EEE499B. His guidance helped us in all type of research, writings and completing the project.

Our sincere thanks also goes to North South University, Dhaka, Bangladesh for giving us such a platform where we can have an industrial level experience as a part of our academics.

We would also like to thank my friends **X, Y, and Z** for helping us in this project.

Last but not the least, we would like to thank our family as their inspiration and guidance kept us focused and motivated.

ABSTRACT

Speaking System for Mute And Deaf People

The major goal of this paper is to provide social service and to implement an automatic speaking system for the deaf and dumb. Communication is one of the most important aspects of human life. Every living being communicates in their own unique way. What kind of existence would we have if we couldn't speak or listen? So, in general, we can observe that many people in our community are not as fortunate as we are. There are certain individuals who are unable to speak or listen. As a result, the primary goal of our initiative is to assist people who are unable to speak or listen. Because many of us do not understand sign language, it will make it easier for people with disabilities to communicate with us and share their experiences. It will have a significant impact on healthcare and education. We're utilizing wearable gloves so that anyone can do it. An intelligent sign language recognition system for deaf individuals was developed in this study. Four flex sensors, an accelerometer, a speaker module, gloves, an Arduino Uno, an LCD screen, a GSM 800L module, and a Lithium Rechargeable Battery were utilized in this project. Our hardware tools after connecting to basic C programming runs successfully.