



**Department of Electrical and Computer Engineering
North South University**

Senior Design Project

Bangla Text Reading Facility For Unprivileged People Using Deep CNN

Dip Roy	ID# 1912355042
Ashiful Alam Shuvo	ID# 1731435642
A.B.M Kaish Ibna Sufian	ID# 1731253042

Faculty Advisor:

Dr. Md. Shahriar Karim

Assistant Professor

ECE Department

Spring, 2023

LETTER OF TRANSMITTAL

June, 2023

To

Dr. Rajesh Palit
Chairman,
Department of Electrical and Computer Engineering
North South University, Dhaka

Subject: Submission of Capstone Project Report on “Bangla Text Reading Facility For
Unprivileged People Using Deep CNN”

Dear Sir,

With due respect, we would like to submit our Capstone Project Report on “**Bangla Text Reading Facility For Unprivileged People Using Deep CNN**” as a part of our BSc program. Through this project, we were able to create human-sounding voices from Bengali text. For illiterate or blind persons, our model can read aloud any Bengali text or news. We learned a lot from working on this project, which helped us apply what we had learned in the real world. We made an effort to the best of our ability to meet all the requirements for this report.

We will be highly obliged if you kindly receive this report and provide your valuable judgment. It would give us great pleasure if you found this report useful and enlightening in gaining a clear understanding of the problem.

Sincerely Yours,

.....
Dip Roy
ECE Department
North South University, Bangladesh

.....
Ashiful Alam Shuvo
ECE Department
North South University, Bangladesh

.....
A.B.M Kaish Ibna Sufian
ECE Department
North South University, Bangladesh

APPROVAL

Dip Roy (1912355042), Ashiful Alam Shuvo (1731435642) and A.B.M Kaish Ibna Sufian (1731253042) from Electrical and Computer Engineering Department of North South University, have worked on the Senior Design Project titled “**Bangla Text Reading Facility For Unprivileged People Using Deep CNN**” under the supervision of Dr. Md. Shahriar Karim partial fulfillment of the requirement for the degree of Bachelors of Science in Engineering and has been accepted as satisfactory.

Supervisor’s Signature

.....

Dr. Md. Shahriar Karim

Assistant Professor

Department of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh.

Chairman’s Signature

.....

Dr. Rajesh Palit

Professor

Department of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh.

DECLARATION

This is a declaration that this work is our original creation. This work in its entirety or in part has not been submitted anywhere else for the award of any other degree or diploma. All information pertaining to the project will be kept private and shall not be disclosed without the express approval of the project manager. This paper has correctly acknowledged and cited all prior works that are pertinent. As mentioned by the supervisor, the anti-plagiarism policy has been upheld.

Students' names & Signatures

1. Dip Roy

2. Ashiful Alam Shuvo

3. A.B.M Kaish Ibna Sufian

ACKNOWLEDGEMENTS

We would like to express our sincere appreciation to Dr. Mohammad Shahriar Karim, Assistant Professor, Department of Electrical and Computer Engineering, North South University, Bangladesh, for his essential support, nimble guidance, and advice regarding the experiments, research, and theoretical studies that were followed throughout the current project as well as in the creation of the current report.

Additionally, we also like to thank the Department of Electrical and Computer Engineering at North South University in Bangladesh for helping to make the research possible.

Last but not at least, thanks to the Almighty for helping us in every step of this thesis work.

ABSTRACT

Bangla Text Reading Facility For Unprivileged People Using Deep CNN

Bengali Text-to-Speech (TTS) is the term used to describe the process of turning written Bengali text, including sentences, paragraphs, and documents, into spoken Bengali speech. Creating artificial human voices from text is referred to as text-to-speech. TTS systems are capable of producing voices that sound like humans. In this study, we provide a unique Bengali text-to-speech (TTS) method based on deep convolutional neural networks (CNN) without recurrent components. For our Text to Voice System (TTS) for Bengali Language, our primary strategy is to provide a high-quality Bengali voice and audio processing unit. The goal of this work is to show how a different neural TTS that just employs CNN can lower these training expenses. It took a long time to train the suggested Deep Convolutional TTS. Our major objective is to teach the model how to read Bengali text and produce voice automatically.