



Senior Design Project (CSE499)
Spring,2022

Bangla Text to Speech With Emotion

Name: Shaif Hossain Emon ID # 1811603642

Name: Maruf Mustar Moon ID # 1811009642

Name: Md Farhad Gazi ID # 1621760042

Name: Md. Riazat Kabir Shuvo ID # 1621535042

Faculty Advisor

Dr. Md Shahriar Karim

Assistant Professor

Department of Electrical and Computer Engineering

North South University

Dhaka, Bangladesh

LETTER OF TRANSMITTAL

May, 2022

To

Dr. Mohammad Rezaul Bari
Associate Professor and Chairman,
Department of Electrical and Computer Engineering,
North South University, Dhaka.

Subject: Submission of CSE499B Senior Project Report on “Bangla Text To Speech with Emotion”.

Dear Sir,

With due respect, we would like to submit our Senior Project Report on “Bangla Text To Speech with Emotion” as a part of our BSc program. The report deals on creating an application where we can generate emotional speech from a given input text. With the ease of the user interface the experience from this application will be helpful to generate audio for a Bangla text.

This Research project was very much valuable to us as it helped us to gain experience from practical field. It was a great learning experience for us. We tried to the maximum competence to meet all the dimensions required from this report.

We will be highly obliged if you are kind enough to 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,

Shaif Hossain Emon

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[Name] Department
of ECE
North South University, Bangladesh

Md Farhad Gazi

.....
[Name] Department
of ECE
North South University, Bangladesh

Md. Riazat Kabir Shuvo

.....
[Name] Department
of ECE
North South University, Bangladesh

Maruf Mustar Moon

.....
[Name] Department
of ECE
North South University, Bangladesh

Approval

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation.

Dr. Md Shahriar Karim

Assistant Professor

Department of Electrical and Computer Engineering

North South University

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation.

Dr. Mohammad Rezaul Bari

Associate Professor & Chair

Department of Electrical and Computer Engineering

North South University

Declaration

It is hereby acknowledged that:

- No illegitimate procedure has been practiced during the preparation of this document.
- This document does not contain any previously published material without proper citation.
- This document represents our accomplishments as undergraduate students at the North South University.

Sincerely,

Shaif Hossain Emon
1811603642

Maruf Mustar Moon
1811009642

Md Farhad Gazi
1621760042

Md. Riazat Kabir Shuvo
1621535042

Abstract

Spoken language technology improved a lot. There are many text to speech models like tacotron, tacotron 2, deep voice, Fastspeech, and wavelet are used for synthesizing speech. Tacotron 2 has a 4.58 mean opinion score, mostly human-like speech generated by a computer. There is no work done for an emotional Bangla text-to-speech. This paper proposes a transfer learning approach for generating emotional speech with the respective tacotron two models. We have created a Bangla Emotional Text To speech web app. It generates Bangla speech for a text or audio input with a specific emotion. Initially, it gives speeches for three types of emotions and the poem. Users can choose which kind of emotions they want in the speech. Then their text will go to one of our tacotron two models. We have three models for creating sad, neutral, and happy speech. We have created another model for reading poems. For training our sad and happy model, we have built our dataset.