CSE 350 - Project Work III

Project Proposal

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Title

Emotion Classification of Bengali Speech Using Segmentation of Vowel-Like Region.

Objective

In this project, a dataset for speech emotion classification for Bengali language using vowel-like regions will be developed.

Motivation

For emotion classification, normally the entire active speech region is used. There are also a few studies performed on segmented sound units, such as syllables, phones, vowel, consonant and voiced for speech emotion classification.
Analysis and classification of speech emotion can improve:

- Speech recognition and speaker recognition
- Healthcare system
- Intelligent assistant
- Surveillance

A few research have been done in speech emotion classification for Bengali language. For this we want to build a dataset for speech emotion classification using vowel-like segments.

Methodology:

Planning:

- From speech signals of male and female which conveys different emotions (happy, disgust, sad, angry, neutral, surprise and fear), we will identify the vowel segments from the signal using Praat software. After extracting appropriate vowel segments, we will build our dataset.
- Selecting appropriate model, we will train the system.
- Creating a web application, where user can input emotional speech file and can get appropriate emotion as output.

Technology:

1. Praat software
2. Backend: Django
3. UI: HTML, CSS and JavaScript
4. Language: Python
5. Database: MySQL

Outcome:

Though Bangla is one of most widely spoken language, there is not much research carried out in the field of speech emotion classification. We hope out developed dataset in this regard will build stage for further analysis and research.