HCL - INTERN MINI PROJECT

Voice Emotion Recognition System

Naveena Ramesh Vardhini J – 39110687

Abstract:

Voice Emotion Recognition system will analyse the speech signals and predict the emotions. The system will determine the emotions present in the speech signa. The system is built with the language python and librosa, sound file libraries, which are part of scikit. This librosa library undergoes pre-processing of the dataset in-order to clean the audio signals. During prediction the system recognizes the audio file which is the WAV format and outcome as which type of emotions.

Pre-processing:

- Silence Removal – Remove the unwanted noise
- Pre – emphasis – Amplitude of speech
- Normalization – prepare the standard form of data

Feature Extraction:

Getting the desired features to find the emotion

- Prosodic – Deals with how we speak
- Spectral – frequency

Functions:

- MFCC
- LPC
- PLP

Requirements:

For this project we undergo the following requirements

- Pandas
- NumPy
- Scikit-learn
- Librosa
- MLP Classifier

Classification:

Map the features with corresponding emotions using classification model, we can use either traditional classification model or deep learning model. now in these modern days people prefer neural network model in order to get higher accuracy (accurate prediction) in traditional model.

Flow diagram: