TECHNOLOGY PROJECT-GROUP2-GROUP 2

GY PROJECT-GROUP 2

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**SPEECH ANALYSIS :**

**FOCUS ON:**

To analyse the speech for some of the following :

* Detecting speech v/s silence
* Detecting male and female speakers
* To present analytic data for the android group to display

**ABSTRACT :**

Comparison of speech with the text as medium of communication :

Speech recognition being a non- biometric technology allows machine to understand the words the speaker pronounces . The core part of speech recognition is converting audio files into a 2X2 array . Speech thus being a defined as most natural ,inuitive means for human communication which not only express the thoughts and feelings but also articulates sound gestures for communication purposes . There are different forms of speech that can be categorized into various Dialects, Accents .More advanced level of speech signal level exists in the form of: Amplitude variation, Duration, Pitch, Timbre .

**APPLICATIONS OF ANALYSIS OF SPEECH :**

**1**: Voice activity detection : here the segments in the waveform of audio where speech is present are recognized whereas the silent segments and non-speech are neglected .

**2**: Enhancing the speech :increasing the speech quality by removing the noise factor from the extracted segments .

**3**:Recognizing the speech: transforming the speech signal into text form.

**4**: Now from the text extract the natural speech making the speech sound more natural with emotions .

**5**: recognizing the speaker(speaker diarization ) : process of segmentation of speech signals into chunks belonging to different speakers and identifying who is speaking at a particular time .

**6**: separating audio source : this separates mixed or overlapped speech from noise.

**7**:modifying the speech: this is done by changing the emotion, tone and thus converting it to speech spoken by speaker

**8**:classification of emotional speech : recognizing and identifying different emotions like happy, sad, angry and anxiety

**9:** spotting the keyword: detecting specific keywords in entire speech utterance .