Abstract

Speaker recognition is the identification of the person who is speaking by characteristics of their voices, also called "voice recognition". The components of Speaker Recognition include Speaker Identification (SI) and Speaker Verification (SV). Speaker identification is the task of determining an unknown speaker's identity. If the speaker claims to be of a certain identity and the voice is to verify this claim, this is called Speaker Verification. It determines whether an unknown voice matches the known voice of a speaker whose identity is being claimed. This paper proposes Speaker Verification task. There are two phases in the Speaker Verification task namely, training and testing. In the training phase, different features such as Mel Frequency Cepstral Coefficient (MFCC), Linear Predictive Cepstral Coefficient (LPCC), Perceptual Linear Predictive (PLP) are extracted from the speech signal and is trained by Support Vector Machine to get the target speaker model. It is trained with both actual speaker and impostor utterances. In the testing phase, features are extracted from the test speech signal. The test features are extracted for different duration of time. The extracted feature vectors are given to the claimed speaker model and the decision is taken as authorised speaker or an impostor. The performance of a speaker verification task is analysed using different features with different utterance sizes. The result shows that the performance of a speaker verification task decreases when the duration of the speech utterances decreased.
Refernces

- Shi-Huang Chen and Yu-Ren Luo "Speaker Verification Using MFCC and Support Vector Machine"; International Multiconference of Engineers and Computer Scientists, 2009

Index Terms

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Keywords

Mel Frequency Cepstral Coefficient (MFCC) Linear Predictive Cepstral Coefficient (LPCC) Perceptual Linear Predictive (PLP)
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