Abstract

Speaker recognition is one of the research potential areas with applications in biometrics and content-based retrievals, it helps to identify a speaker from the speech signal. To develop an effective speaker recognition system, it is needed to have a concrete methodology of feature extraction and a mechanism to model these features, most of the models available in the
literature are more focused towards the speech rather than the speaker, a novel speaker model is developed in this article using the generalized gamma mixture model, here we have considered Mel frequency cepstral coefficients (MFCC) and linear predictive coefficients (LPC). To demonstrate our model we have generated data base with 200 speakers for training the data and 50 speech samples for testing the data, the speech samples are considered for testing are segmented into frames of both long duration and short duration of five seconds, ten seconds and fifteen seconds respectively. The accuracy of the developed methodology is calculated and above 88% of accuracy is observed.

References

- Christos Tzagkarakis and Athanasios Mouchtaris,(2010), Robust Text-independent Speaker Identification using short testand training sessions, 18th European signal Processing conference(EUSIPCO-2010).
Text Dependent & Gender Independent Speaker Recognition Model based on Generalizations of Gamma Distribution

Index Terms

Computer Science
Pattern Recognition

Keywords
Speaker Recognition
Generalized Gamma Distribution

Feature extraction

MFCC
LPC
Text Dependent & Gender Independent Speaker Recognition Model based on Generalizations of Gamma Distribution