Inverted Mel Feature Set based Text-Independent Speaker Identification using Finite Doubly Truncated Gaussian Mixture Model

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Abstract

This paper provides an efficient approach for text-independent speaker identification using the Inverted Mel-frequency Cepstral Coefficients as feature set and Finite Doubly Truncated Gaussian Mixture as Model (FDTGMM). Over the years, Mel-Frequency Cepstral Coefficients (MFCC), modeled on the human auditory system, has been used as a standard acoustic feature set for speech related applications. Furthermore, it has been shown that the Inverted Mel-frequency Cepstral Coefficients (IMFCC) is also a useful feature set for Speaker identification, which contains information complementary to MFCC as, it covers high frequency region more closely. The performance of the developed model is studied through experimental evaluation with 45 speaker’s data base and identification accuracy.

References

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Index Terms

Computer Science Information Sciences

Keywords

Speaker Identification, IMFCC, FDTGMM, Identification accuracy.