Speaker recognition is the process of recognizing the speaker based on characteristics such as pitch, tone in the speech wave. Background noise influences the overall efficiency of speaker recognition system and is still considered as one of the most challenging issue in Speaker Recognition System (SRS). In this paper mel-frequency cepstral coefficients (MFCC) feature is used along with Vector Quantisation (VQ)-LBG [Linde, Buzo and Gray, 1980] algorithm for designing SRS. MFCC feature is extracted from the input speech and then vector quantization of the extracted MFCC features is done using VQLBG algorithm. It reduces the dimensionality of the input vector. These MFCCs are used as the speaker features for matching via Support Vector Machine (SVM) method. The experimental results show that the proposed text-dependent speaker identification system gives an accuracy rate of 95.0%.

References

Speaker Recognition using Support Vector Machine


Index Terms

Computer Science

Pattern Recognition
Keywords
Feature extraction  vector quantization  MFCC  SVM