Abstract

Feature extraction is the process of deriving new weakly correlated features from the original features in order to reduce the cost of feature measurement, increase classifier efficiency, and allows higher classification accuracy. The selection and quality of the features representing each pattern have considerable bearing on the success of subsequent pattern classification. In
this paper, we supply a comparative study for best feature extraction method for speaker recognition system. A Linear Discriminant Analysis (LDA) method is compared to two well-known feature extraction techniques, namely Principal Component Analysis (PCA) and Sequential Forward Search (SFS). Evaluation is carried out on Arabic speech database using four acoustic representations combined with prosodic features. We show that LDA-based feature outperformed PCA and SFS in acoustic alone as well as for acoustic and prosodic combined features.

Reference


Index Terms

Computer Science  
Signal Processing
### Key words

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