Abstract

Audio classification serves as the fundamental step towards the rapid growth in audio data volume. Automatic audio classification is very useful in audio indexing; content based audio retrieval and online audio distribution. The accuracy of the classification relies on the strength of the features and classification scheme. In this work both, time domain and frequency domain features are extracted from the input signal. Time domain features are Zero Crossing Rate (ZCR) and Short Time Energy (STE). Frequency domain features are spectral centroid, spectral flux, spectral entropy and spectral roll-off. After feature extraction, classification is carried out, using SVM model. The proposed feature extraction and classification models results in better accuracy in speech/music classification.

References

- Boser E. Bernhard, Guyon M. Isabelle, and Vapnik N. Vladimir. A training algorithm for optimal margin classifiers. In 5th Annual ACM Workshop on COLT, pages 144–152. ACM
Speech/Music Classification using SVM


Index Terms

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