

{tag} International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

[Volume 148](#)

-
[Number 3](#)

Year of Publication: 2016

Authors:

R. Thiruvengatanadhan, P. Dhanalakshmi

10.5120/ijca2016911095

{bibtex}2016911095.bib{/bibtex}

Abstract

Audio processing systems have taken gigantic leaps in everyday life of most people in developed countries. The technologies are getting entrenched in providing entertainment to consumers. Digital audio techniques have now achieved domination in audio delivery with CD players, internet radio, mp3 players and iPods being the systems of choice in many cases. With the huge growth of the digital music databases people begin to realize the importance of effectively managing music databases relying on music content analysis. The goal of music indexing and retrieval system is to provide the user with capabilities to index and retrieve the music data in an efficient manner. For efficient music retrieval, some sort of music similarity measure is desirable. In this paper, we propose a method for indexing and retrieval of the music using Gaussian mixture models. Acoustic features namely MFCC, chromagram, tempogram and MPEG-7 features are used to create the index. Retrieval is based on the highest probability density function and the experimental analysis shows that the rate of average number of clips retrieved for each query is 5 clips.

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Index Terms

Computer Science

Signal Processing

Keywords

Acoustic Feature Extraction, Indexing and Retrieval, Gaussian Mixture Model and Probability density function