



**VIDYA JYOTHI INSTITUTE OF TECHNOLOGY**  
(Accredited by NAAC & NBA , Approved By A.I.C.T.E., New Delhi) permanently affiliated JNTUH  
(Aziz Nagar, C.B.Post, Hyderabad- 500075)  
(AUTONOMOUS)  
**COMPUTER SCIENCE & ENGINEERING**

Innovations In Teaching and Learning

**Faculty Name:** Mr.Y.Prabhu Kumar

**Course:** DWDM

**Class-Section:** B

**Mode of Innovative Teaching Mode:** Project based learning

**Description about the mode:**

**Project-based learning (PBL)** is a teaching method that encourages learning by actively engaging in real-world and personally meaningful projects.

Students will typically work on a project over an extended period of time – anywhere from a week up to a semester – that engages them in solving a real-world problem or answering a complex question. They then show what they learned by creating a public product or presentation for a real audience.

**Topic Handled:** Classification Techniques

**Outcome of the teaching mode:** Students can Apply Different classification algorithms on data sets to classify the Data for Analysis.

**Instructor**

**CSE-HOD**

A Major Project Report on

**MUSIC EMOTION GENRE CLASSIFICATION**

Submitted to partial fulfillment of the requirements for the award of the degree

Of

**BACHELOR OF TECHNOLOGY**

in

**COMPUTER SCIENCE & ENGINEERING**

By

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## ABSTRACT

### MUSIC EMOTION GENRE CLASSIFICATION

Music Emotion Genres Classification is a machine learning based classification model which is used to classify the genres as well as emotions of audio songs. Musical genres are categorical labels created by humans to characterize piece of music. A musical genre is characterized by common characteristics typically related to the instrumentation, rhythmic structure and harmonic content of the music.

The performance and relative importance of the proposed features is investigated by training the statistical pattern recognition classifiers using real world audio collections. We show that genre-based grouping as a precursor greatly improves the performance of emotion classification. In this project, we built two systems, one for music genre classification and another for music emotion estimation using KNN model, and compared the performances on a particular dataset by implementing various algorithms. In all cases, the music audio features were processed in the same way, and the effects of different feature extraction methods and their various combinations were also investigated. The evaluation experiment clearly shows that in both music genre classification and music emotion estimation tasks KNN performed consistently better than other algorithms. Automatic music genre classification can assist or replace the human user in this process and would be a valuable addition to music Information Retrieval System.