NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

2024-2025

BATCH NUMBER	DB 10
TEAM MEMBERS	ARJUN THORLIKONDA (22475A0501) PAVAN KUMAR TUNGA (22475A0516) KALYAN SATULURI (22475A0503)
GUIDE	T G RAMNADH BABU
TITLE	Optimizing Musical Genre Recognition Using CNN and MFCCs A DEEP LEARNING APPROACH
DOMAIN/TECHNOLOGY	DEEP LEARNING
BASE PAPER LINK	https://ieeexplore.ieee.org/document/10127554
DATASET LINK	gtzan-dataset-music-genre-classification
SOFTWARE REQUIREMENTS	TensorFlow, 450 Epochs, batch size 32, Learning rate 0.0001, Drop-out rate 0.3, Adam optimizer
HARDWARE REQUIREMENTS	Windows 10, 16GB RAM
ABSTRACT	Music genres are categories that classify music based on its common traditions and customs. These genres can enhance the enjoyment of music by providing listeners with a way to categorize and understand the music. When used constructively, it helps to better understand the art form, to recognize innovation and, above all, to improve the ability to judge quality. The main goal of this work is to study the different behaviors of musical genres based on their spectral representations and create an automated system for classification. Collecting the properly classified music dataset (i.e., GTZAN Music Genre) the feature-map of the data that is extracted is fed to the neural network model for evaluation. Accuracy of training, testing and validation is acquired. Along with that validation losses are reduced to an extent. The evaluation matrix is also computed. After the model is trained, it is deployed to a server using a Flask,vscode for easy access and use of the trained model for classification.

Signature of the student(s) Signature of the Project Coordinator Signature of the HoD