VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"MUSIC GENRE CLASSIFICATION & RECOMMENDATION USING CNN AND MOBILENETV2"

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

BACHELOR OF ENGINEERING IN

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

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Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

2023 – 2024

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CERTIFICATE

This is to certify that the Project entitled **"MUSIC GENRE CLASSIFICATION & RECOMENDATION SYSTEM USING CNN AND MOBILENETV2"** has been submitted by

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the bonafide students of **Department of Artificial Intelligence & Machine Learning, Alva's Institute of Engineering and Technology** in partial fulfillment for the award of BACHELOR OF ENGINEERING in **DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023–2024. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

15/5/24

Dr. Ramesh G
Project Guide

21/05/2024

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ABSTRACT

This project represents a significant advancement in the field of music genre classification and recommendation by harnessing the power of MobileNet's transfer learning capabilities and custom-designed CNN architectures. By leveraging a diverse dataset and transforming audio samples into spectrograms, the system achieves robust feature representation for input. Through extensive training and fine-tuning processes, both MobileNet and the specialized CNN model are optimized to accurately classify music genres. Evaluation metrics such as accuracy loss and provide insights into the performance of the trained models. Upon deployment, the system seamlessly integrates into digital music platforms, offering users tailored recommendations based on their preferences and listening history. Overall, the results demonstrate the efficacy of transfer learning and CNNs in improving genre classification accuracy and enhancing the user experience in discovering and enjoying music.