

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JNANA SANGAMA",MACHHE, BELAGAVI-590018



ML Mini Project Report
on

Music Recommendation System

Submitted in partial fulfillment of the requirements for the VI semester

Bachelor of Engineering

in

Artificial Intelligence & Machine Learning

of

Visvesvaraya Technological University, Belagavi

by

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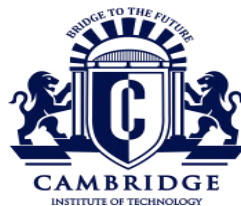
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2023-2024

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CERTIFICATE

Certified that **Mr. Pavan Kumar J**, bearing USN **1CD22AI405** and **Ms. Shiva Priya D** bearing USN **1CD22AI402**, a Bonafede students of **Cambridge Institute of Technology**, has successfully completed the ML Mini Project entitled “**Music Recommendation System**” in partial fulfillment of the requirements for VI semester **Bachelor of Engineering in Artificial Intelligence & Machine Learning** of **Visvesvaraya Technological University, Belagavi** during academic year 2023-24. It is certified that all Corrections/Suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Mini Project report has been approved as it satisfies the academic requirements prescribed for the Bachelor of Engineering degree.

Mini Project Guides,

Dr. Varalatchoumy.M ,

Prof. Syed Hayath
Dept. of AI&ML, CITech

Head of the Department,
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DECLARATION

We **PavanKumar J** and **Shiva Priya D** of VI semester BE, Artificial Intelligence & Machine Learning, Cambridge Institute of Technology, hereby declare that the ML Mini Project entitled “**Music Recommendation System**” has been carried out by us and submitted in partial fulfillment of the course requirements of VI semester **Bachelor of Engineering in Artificial Intelligence & Machine Learning** as prescribed by **Visvesvaraya Technological University, Belagavi**, during the academic year 2023-2024.

We also declare that, to the best of my knowledge and belief, the work reported here does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this by any other student.

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ACKNOWLEDGEMENT

We would like to place on record my deep sense of gratitude to **Shri. D. K. Mohan**, Chairman, Cambridge Group of Institutions, Bangalore, India for providing excellent Infrastructure and Academic Environment at CITech without which this work would not have been possible.

We are extremely thankful to **Dr. G.Indumathi**, Principal, CITech, Bangalore, for providing me the academic ambience and everlasting motivation to carry out this work and shaping our careers.

We express my sincere gratitude to **Dr. Varalatchoumy M.**, Prof. & Head, Dept. of Artificial Intelligence & Machine Learning, CITech, Bangalore, for her stimulating guidance, continuous encouragement and motivation throughout the course of present work.

We also wish to extend my thanks to Mini Project Guides, **Dr. Varalatchoumy M**, Prof. & Head and **Prof. Syed Hayath**, Dept of AI&ML, CITech, Bangalore for the critical, insightful comments, guidance and constructive suggestions to improve the quality of this work.

Finally to all my friends, classmates who always stood by me in difficult situations also helped me in some technical aspects and last but not the least, we wish to express deepest sense of gratitude to my parents who were a constant source of encouragement and stood by me as pillar of strength for completing this work successfully.

PavanKumar J

Shiva Priya D

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ABSTRACT

The Music Recommendation System project leverages machine learning techniques and the extensive Spotify dataset to create a personalized music listening experience. By analyzing various song features, such as acoustic properties and metadata, and integrating user listening history, the system provides tailored song recommendations that match individual preferences. Utilizing algorithms like KMeans clustering, PCA, and t-SNE, the system effectively clusters songs and reduces data dimensionality to visualize and understand patterns. Real-time capabilities and a user-friendly interface built with Gradio enhance accessibility and interactivity, allowing users to receive immediate and relevant music suggestions. This project aims to increase user engagement, improve recommendation accuracy, and continuously adapt to evolving user tastes, offering a scalable and enjoyable music discovery platform . By achieving these objectives, the Music Recommendation System not only provides an enjoyable user experience but also sets a foundation for continuous improvement and scalability in the ever-evolving landscape of digital music consumption.

