



TCET/DEPT/FRM/IP-02/14

Revision: A

Project Guidance

Programme: B.E

Class: E&TC-A

<p>i) Internal Guide Name:</p> <ul style="list-style-type: none"> ● Internal: Mr. Deepak S. Shete ● Group No.: 13 	<p>ii) Projects Title:</p> <p>EmoSense: Emotion-Based</p> <p>Music Recommendation System</p>
<p>iii) Domain and linkage of project title:</p> <p>Machine Learning and Image Processing</p>	<p>iv) Group member names:</p> <ul style="list-style-type: none"> ● Mihir Joshi ● Dhruvi Khimasiya ● Utkarsh Limbachiya
<p>v) Resources Required:.</p> <ul style="list-style-type: none"> ● Software: Vs Code, Google Collab, Kaggle. 	<p>vi) In house (IHP)/Outside Projects(OHP):</p> <ul style="list-style-type: none"> ● Weather Monitoring System ● Bluetooth Control Car
<p>vii) Project Description</p> <p>The Emotion-Based Music Recommendation System is designed to enhance the music streaming experience by leveraging machine learning and data analysis techniques to recommend music based on the user's emotions and preferences.</p>	<p>viii) Project Methodology to be used:</p> <p>Data Collection</p> <p>Emotion Detection</p> <p>User Profiling</p> <p>Recommendation Engine</p>
<p>ix) Outcome Planned:</p> <p>The expected outcome is to provide an easy and convenient way to recommend the music based on users emotions and create a stronger emotional connection with the music.</p>	<p>x) Outcome Achieved:</p> <p>Basics:</p> <p>Created own datasets, connected to datasets and applied the conditions if the users enter the mood based on mood it recommends the songs.</p> <p>Advanced:</p> <p>Collected the dataset with 7 difference classes(mood) (ie. angry, disgust, fear, happy, neutral, sad, surprise). Visualizing and cleaning the data received zero null values. Extracted images from the zip folder (train and test).</p>



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**THAKUR COLLEGE OF
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xi) Weekly Work Status

Week	Work Assign	Work Progress	Reporting	Remark
1	Finding of the Research papers from the IEEE websites for the deep understanding of the Topic	Successfully downloaded and worked on the project guidance using the research papers		
2	Finding of the Research papers from the IEEE websites for the deep understanding of the Topic	Successfully downloaded and worked on the project guidance using the research papers		
3	Hardware setup - Integrating the necessary components, such as cameras, microphones, and speakers.	Successfully integrated the required hardware components, including cameras, microphones, and speakers		
4	Creation of the Model for the training purpose on the windows platform with the usage of python	Developed partial part of the working model. Worked on developing, testing and working of the model		
5	Installation of the required of modules and files for the modeling testing	Successfully Installed the required files for the model testing		
6	Integration, collection and storage of the datasets for the working model and implementing on software	Successfully created the database that is required (consisting of datasets for images of different moods and also songs) .		
7	Finalizing of the algorithm to be used for the software of face detection	CNN and resnet50V2 being used		
8	Demonstration of the basic working of the training model	Partially demonstrated the working of the training model		
9	Software Development and Software Deployment	Partially Development Done		
10	Feature implementation - Displaying a To-Do list using the face detection software.	Partially Feature Exaction Done		
11	Data Set for Feature Extraction	Found Dataset for Feature Extraction		
12	Outcome testing :Recognizing of emotion	Output is Coming Recognizing of emotion is done by software		



13	Final testing and deployment of the project.	Final tested and deployed the project.		
14	Prepare the RBL report of the project.	Prepared the RBL report of the project.		
15	Prepare the Black Book.	Prepared the Black Book.		

xii) Learning:

Developing an Emotion-Based Music Recommendation System project entails collecting a rich dataset of music tracks tagged with emotional attributes, extracting pertinent features from audio, lyrics, and metadata, and leveraging machine learning techniques like sentiment analysis, collaborative filtering, or deep learning models to create a system that offers personalized music recommendations based on the listener's current emotional state, enriching their music listening experience by aligning the suggested songs with their emotions in real-time.

xiii) Convertibility to intellectual property:

The convertibility of an Emotion-Based Music Recommendation System into intellectual property (IP) depends on factors such as novel algorithms, unique software code, creative elements, data collection methods, and branding. Protecting it can involve patents, copyrights, trademarks, trade secrets, or data licensing, depending on what aspects of the system are innovative and can be legally safeguarded. Consulting with IP experts is essential to navigate this process effectively.

xiv) Conclusion:

It offers a promising avenue for enhancing the music listening experience by tailoring recommendations to the listener's emotional state. By leveraging innovative algorithms, data analysis techniques, and real-time user feedback, this project has the potential to create a more personalized and emotionally resonant music recommendation system. As technology and AI continue to evolve, the project's success could lead to novel applications in the broader field of personalized content recommendation and user experience enhancement. However, the project's effectiveness ultimately hinges on the quality of data, the sophistication of algorithms, and the ability to address user privacy concerns and ethical considerations, all of which should be carefully considered during its development.

Name & Signature of Faculty
Principal Date:

Name & Signature of HOD
Date:

Name & Signature of
Date:

Note: Project synopsis should be prepared and validated copy to be maintained by faculty in personal file. Due date: _____

Completion Date: _____

If not as per the due date

(Reason):