



IJIRCCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 9, Issue 7, July 2021

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.542



9940 572 462



6381 907 438



ijircce@gmail.com



www.ijircce.com

Sentiment Analysis with Emotion Based Audio Player

N. Srilekha¹, K.Neshma², L.Kavya Sri³, Mrs.G.Sirisha, M.Tech⁴

UG Students, Dept of IT, Vasireddy Venkatadri Institute of Technology, Nambur, Guntur District, Andhra Pradesh, India^{1,2,3}

Assistant Professor, Dept of IT, Vasireddy Venkatadri Institute of Technology, Nambur, Guntur District, Andhra Pradesh, India⁴

ABSTRACT: Sentiment analysis is the use of natural language processing analysis to systematically identify, extract and study affective states of information. It plays an important role extraction of an individual's behavior and emotional state. In this system we can find different types of song playing modes apart from emotion based they are Random mode and queue mode. Here we extract individual's behavior and emotional state of a person. Facial expressions are captured using an inbuilt camera and are categorized into four types happy, angry, sad, neutral based on one of these types, songs will be played.

KEYWORDS: Emotions, Music Player, Facial Expression.

I. INTRODUCTION

Music is an important entertainment medium. With advancement of technology, the optimization of manual work has gained a lot of attention. Currently, there are many traditional music players that require songs to be manually selected and organized. User, have to create and update play-list for each mood, which is time consuming. Some of the music players have advanced features like providing lyrics and recommending similar songs based on the singer or genre. In this system there are three different modes to play songs, which take input from the user and play songs. The modes used in this system are Random mode, Queue mode, Emotion mode. These modes are selected manually by the user. Emotion mode extracts features from the users face expression by the inbuilt camera in the background. Recognition of facial expressions is used to identify the basic human emotions. Facial expressions give important rules about emotions.

II. LITERATURE SURVEY

Anuja Arora ; Aastha Kaul ; Vatsala Mittal [2], they submitted a program in which the DEAM data set was used to classify the emotions. It has more than 2800 songs with 4 emotions annotated: Happy, Sad, Angry and Relax, and with their values of valence and excitement. The idea behind this article is to pay attention to predicting emotions of an audio file as to how good audio elements are used in the music player.

Sushmita G. Kamble and A. H. Kulkarni [3], they proposed a system in which they used PCA (Principal component approach) for feature extraction. To classify and recognize the expression Euclidean distance classifier was used. Then, the user's corresponding emotional state is recognized. When the user's expression is recognized, songs belonging to that category are then played. They used the database with 7 expressions of 4 individual's persons that results into 112 trained images.

S. L. Happy and A. Routray [4], image from database is passed to the facial landmark detection stage to remove noise by applying Gaussian Filter or mask. Here itself they used Viola Jones technique of Haar-like features with AdaBoost learning for face detection. The feature detection stage consists of Eyebrow corners detector, Eye detector, Noise detector, Lip corner detector. After this active facial patches are extracted, The classification of features is done by SVM (Support Vector Machine). While testing it will take the hundreds of images from the database and extract the features and classifies accordingly. They used CK+ (Cohn-Kanade) dataset and JAFEE dataset for training and testing the database. The training database consist of 329 images in total.

III. EXSISTING SYSTEM

The existing applications for music players are being evaluated to establish an appropriate application. There are currently many major streaming music applications with a large percentage of users. The features that are available in the previously developed Music players are as follows:

- a) Manual selection of songs.
- b) Party Shuffle.
- c) Playlist

Apple Music: The well-known worldwide music streaming application. The advantage of this application is the music suggestion by user favorite; however, the subscription cost is quite high.

- Spotify: Another worldwide music streaming application. It also suggests songs based on the user's data collection. Moreover, the subscription cost is much cheaper than Apple Music.
- Wynk Music: This is a music streaming & downloading app, for every mood! it has more than 1.8 million songs across Indian and International music. Stream and download songs by genres, moods, artists or simply tune into one often many Radio channels and let it surprise.

IV. PROPOSED SYSTEM

We consider the notion of collecting human emotion from the user's expressions, and explore how this information could be used to improve the user's experience with audio players. We present a new emotion based and user interactive music system. Proposed System aims to provide user preferred music based on emotion by recognising face expressions. Based on user emotions, songs related to that emotion will be played.

V. MODULES

- Image Capturing:

The audio player appears and opens device's camera to capture the emotion. All these process are carried out in the backside of the music player.



Fig1: Image Capturing

- Emotion extraction:

After the picture is captured by the inbuilt camera, the captured image is used to detect the image's emotion. The user's emotion is extracted. The application supports four emotions: happiness, sadness, surprise, anger, neutral.



Fig 2. Emotion Extraction

- Audio Integration:

The emotion extraction module and audio feature extraction module is finally mapped and combined using an Emotion-Audio integration module. For example, if an input facial image is categorized under joy, the system will display songs under joy, joy-anger, Joy-Excitement, Joy-surprise category.

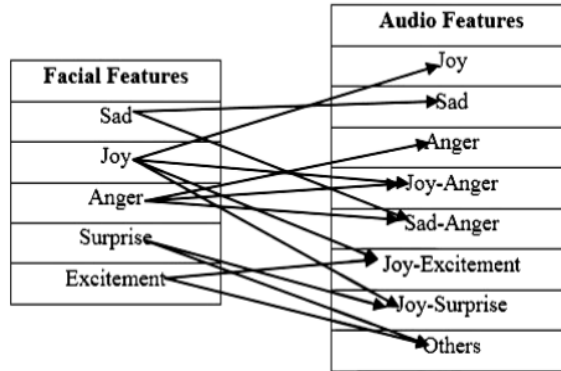


Fig 3 Audio Integration

- Generating music player:

In this module a list of songs forms the input. According to the emotion of the user, the playlists are opened and songs are played.

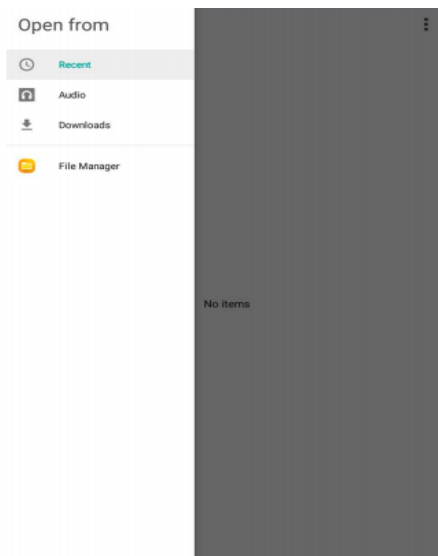


Fig 4. Generating Music Player

VI. EXPERIMENT RESULTS

After successful execution of python program in Visual Studio code in the terminal window the audio player opens and songs are played in random mode, emotion mode and queue mode. if emotion mode is enabled then camera is opened and songs are played according to the emotion captured.

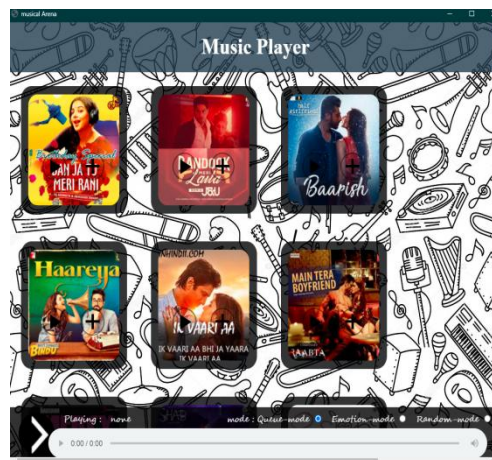


Fig 5.Final Result

VII.CONCLUSION

Emotion recognition is a rising trend which helps in reducing the time involved in completing tasks. This system helps the user by playing songs based on the user's facial expression. Totally our work aims to develop a player which is based on user need and it helps to revive in case of free time or leisure time if we want to hear music based on our current situation. The Emotion-Based Music Player is used to automate and give a better music player experience for the end user. The application solves the basic needs of music listeners without troubling them as existing applications do: it uses technology to increase the interaction of the system with the user in many ways. It eases the work of the end-user by capturing the image using a camera, determining their emotion, and suggesting a customized play-list through a more advanced and interactive system. The user will also be notified of songs that are not being played, to help them free up storage space.

REFERENCES

1. Ramya Ramanathan, RadhaKumaran, Ramrohan, Rajat Gupta, VishalakshiPrabhu "An Intelligent Music Player Base On Emotion Recognition" Published By IEEE International Conference On Computational Systems And Information Technology For Sustainable Solutions 2017 Page no 299-303.
2. Pratik Gala, Raj Shah, Vinee Shah, Yash Shah, Mrs. SarikaRane "MoodyPlayer: A Music Player Based On Facial Expression Recognition" Published by IRJET Volume: 05 Issue: 04 on April-2018 ISSN: 2395-0056.
3. F. ADAT, C. MAAOUI and A. PRUSKI "Human -Computer Interaction Using Emotion Recognition From Facial Expression" Published by IEEE UKSim 5th European Symposium on Computer Modeling And Simulation on 2011.
4. Kyogu Lee and Minsu Cho "Mood Classification from Musical Audio Using User Group-Dependent Model" Published by IEEE 10th International Conference on Machine Learning and Application on 2011 (978-0- 7695-4607-0/11).
5. JungHyun Kim, Seungjae Lee, WonYoungYoo "Implementation And Analysis Of Mood-Based Music Recommendation System" Published by ICACT on 2013 ISBN 978-89-968650-1-8.
6. Sushmita G. Kamble and Asso. Prof. A.H. Kulkarni "Facial Expression Based Music Player" Published by IEEE International Conference on Advance Computing, ICACCI on Sep, 2016.
7. Karthik Subramanian Nathan, ManasiArun and Megala S kannan "EMOSIC-An Emotion Based Music Player for Android" Published by IEEE, ISSPIT on 2017.
8. Shlok Gilda, HussainZafar, ChintanSoni and KshitijaWaghrdekar "Smart Music Player Integration Facial Emotion Recognition And Music Mood Recommendation" Published by IEEE WISPNET on 2017.
9. Renuka S. Deshmukh, VandanaJagtap and ShilpaPaygude "Facial Emotion Recognition system Through Machine Learning" Published by ICICCS on 2017.
10. SwathiSwaminathan and E. Glenn Schellenberg "Current Emotion Research In Music Psychology" Published Emotion Review Vol. 7 ,No.2 on April 2015 (189-197), ISSN 1754-0739.
11. Maruthi Raja S K, Kumaran V, KeerthiVasanAandKavitha N "Real Time Intelligent Emotional Music Player Using Android" Published by Journal for Research Volume 03, Issue 01 on March 2017.
12. Prof. Vijaykumar R. Ghule, Abhijeet B. Benke, Shubham S. Jadhav and Swapnil A. Joshi "Emotion Based Music Player Using Facial Recognition" Published by IJIRCCF Volume 05, Issue 02 on Feb 2017.



INNO  **SPACE**
SJIF Scientific Journal Impact Factor
Impact Factor: 7.542



ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

 **9940 572 462**  **6381 907 438**  **ijircce@gmail.com**



www.ijircce.com

Scan to save the contact details