



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

IJRSET

International Journal of Innovative Research in
SCIENCE | ENGINEERING | TECHNOLOGY

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 12, Issue 4, April 2023

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 8.423

9940 572 462

6381 907 438

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Emotion Based Music Recommendation System

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ABSTRACT:In our daily lives, music is frequently utilised to control our mood and our emotions. In order to describe the links between emotion and music, multiple studies involving music data extraction along with affecting interaction between humans and computers have been given. In the modern day, human feeling is extremely important. Human sentiments, which may be conveyed via action or expression, are the foundation of emotion. Emotion conveys the unique behaviour of the particular human, which can take a variety of forms. Extraction of emotion reveals a person's unique behavioural state. The goal of this research is to extract facial features, identify emotions, and play music in accordance with those emotions. Face expressions are recorded using a local recording tool or an internal camera. We have made a web application prototype called Music emotion Web that uses Music emotion. Here, an algorithm is used to identify a feature in the collected image. Therefore, song will get played automatically depending on the face expression that was caught.

I. INTRODUCTION

Any human civilization would be incomplete without music, which has the power to evoke a wide variety of complex and deep emotions in both the composers of the music and the listeners. With intriguing developments and revolutions also occurring in the music industry, the digital era brought about significant shifts in the business, industrial, and social realms. On the contrary hand, emotion or mood has evolved into a key factor that digital technologies employ to forecast social behaviours or condition individuals in their relationships with others and work-related tasks. This has led to a growing interest in musical systems that control our everyday mood and emotions. By identifying and recording the user's emotions in real time, this notion suggests music to the user. The Emotion-Based Music System uses machine learning to be able to recognise emotions on the user's face. The user will be shown/recommended songs based on the mood that has been identified for them. In this programme, a person's image is taken in real time by a device with access to local hardware, and based on that image, a database of data sets already recorded on the local device is compared. After processing, the application determines the user's current mood and suggests music. This technique is primarily advocated since music has a significant function in modern society in terms of lowering stress.

II. EXISTING SYSTEM

Existing methods require a lot of manual labour and employ cooperation techniques that draw on user history to provide music recommendations. Numerous methods now in use rely on historical data to recommend music, and the alternative algorithms are typically sluggish, less precise, and even call for extra gear such as EEG or physiology sensors.

III. PROPOSED SYSTEM

The suggested approach enables us to give users and music systems a means of interaction. This project is primarily concerned with the user's favourite music, which is suggested because of emotional awareness. We have provided a limited number of alternatives in the very first phase of the suggested system, and each has its unique usefulness. Based on spatial recognition, we have provided a list of music and emotions to go along with this. Once the programme is running, the webcam is used to take pictures. As song is one of the finest tools for mood modification, our major goal in developing this system is to create a smart music player that might improve the user's mood.

IV. METHODOLOGY

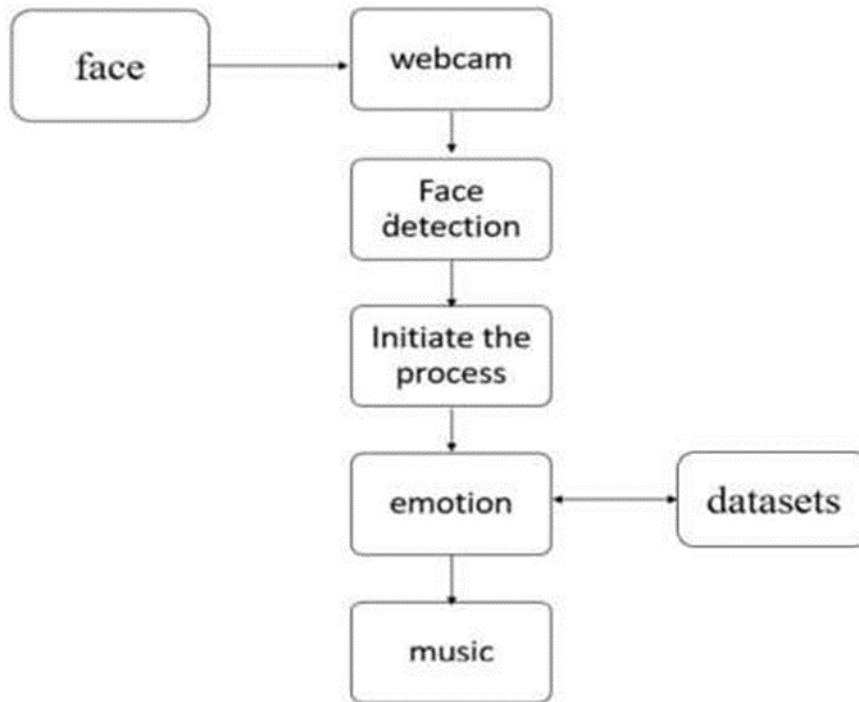


Figure 4.1: Working Model

V. EXPERIMENTAL RESULTS



FIG. 5.1 –MUSIEMOTION LOGIN PAGE

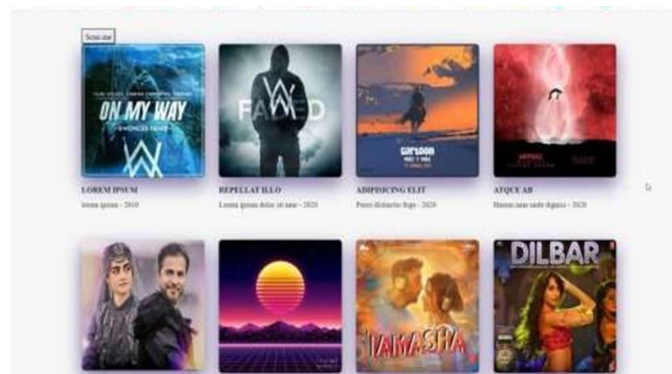


FIG. 5.2 –HOME PAGE

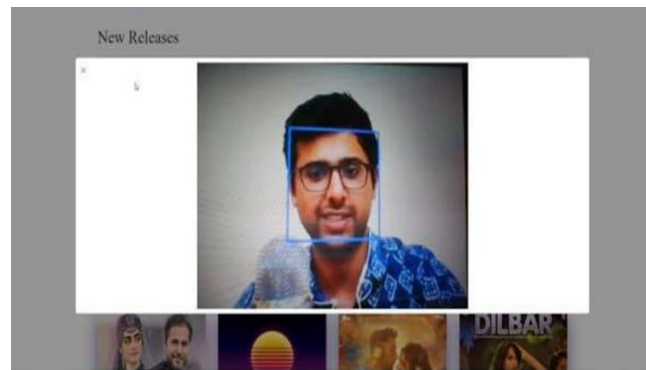


FIG. 5.3 –EMOTION DETECTION SCREEN

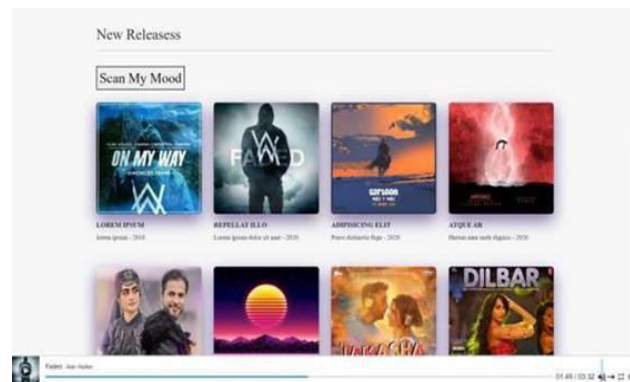


FIG. 5.4 –EMOTION DETECTED

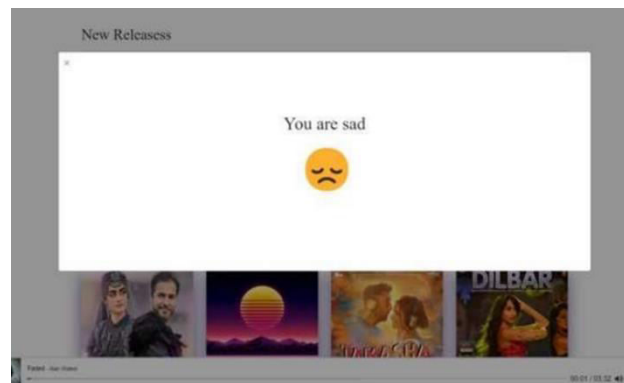


FIG. 5.5 – SONG STARTS PLAYING

VI. FUTURE SCOPE

1. The music player we use may be utilised on a local level and everything in modern society is handy and simple to carry, but if one's feelings could be captured by a variety of sensor devices, it would be simpler to use than the entire manual process, which would be made possible by GSR (galvanic skin response) and PPG (plethysmography physiological sensors).
2. That would provide us with sufficient information to precisely forecast the customer's mood. This system can benefit from having improved capabilities, but it also has to be upgraded frequently.
3. The detecting process improves music playback that occurs automatically. The programmable interface built into the local computer is used to identify facial expressions. a different approach built on the extra emotions that our current framework does not provide.



VII. CONCLUSION

The music suggestion methodology in this project centres on the feelings of the user as shown in real-time photos. The goal of this work is to improve communication between the person using it and their music system. Because music may assist a person change how they feel and because for certain individuals, it can help them relax. Recent progress demonstrates a broad scope for creating an emotion-based music recommendations system. As a result, the current system offers a face-based identification mechanism that uses facial expressions to identify moods and play song in response.

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