

Moody Player (Therapeutic Music player)

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ABSTRACT

The emotion or mood of a user can be determined by his or her facial expressions. These expressions can be extracted from the systems. Emotions or moods in humans. Human emotions can be identified using several approaches. It brings us together across markets, generations, and cultures, Backgrounds, languages, tastes and so on levels of income Music players and other streaming music platforms have a wide range of features. These music platforms are in high demand since they may be utilized at any time and in any location. It's possible to integrate it with daily activities, travel, sports, and so on. Digital music has become the norm thanks to the rapid growth of mobile networks and digital multimedia technology. Many young individuals are looking for mainstream consumer content. Music is frequently used to regulate one's mood. Primarily to improve one's attitude, energy level, or reduce the amount of tension. It's possible that being in the right place at the right moment will help your mental health. As a result, human emotions have a strong connection to music.

A moody player is constructed in our suggested system, which does real-time mood recognition and proposes songs based on the observed mood. This becomes a function in addition to the standard music player apps that come pre-installed on our phones. Customer satisfaction is a significant advantage of implementing mood detection.

Keywords: - face expression, mood, face recognition, music.

I. INTRODUCTION

Facial expressions reveal a person's mood and provide clues about their emotions. Face expressions are a common way for people to communicate their feelings. Lips and eyes not only have sensory receptors, but they also have a lot them. Also, show us how that person is feeling. The work refers to a computer program that takes the form of "Moody Player" is a program that allows you to listen to music based on your emotions. Users will find it easier to create playlists now and playing music.

The aim of the project is to capture a person's emotions through facial expressions and lighten the user's mood by playing a song that fits that mood. It recognizes and captures the feeling a person is expressing themselves, and they might gradually calm down. It normally produces a positive influence on the user's mind. The purpose of a music player is to capture human emotions using the assistance of the webcam interface that is provided in the system of computers When the application is launched, it displays the user's image is captured by the system. The image was captured with a webcam The image that was previously captured. The data will be stored, and the rendering step will begin. After a while, during this time, the user's mood may shift, and it may or may not be positive. It is possible that nothing will change. As a result,

the image is taken after each song or at a certain interval.



Fig.1 Sample image of facial expressions

Face-api.js:

Facial-api.js is a JavaScript facial recognition framework built on top of TensorFlow.js, one of the most popular machine learning toolkits for JavaScript. Face-api is really easy to use. It has a powerful API that simply exposes the most important configuration options while masking all of the underlying layers, such as neural network creation. It contains pre-built drawing functions in addition to multiple recognition models, so we don't have to tinker with a canvas.

TensorFlow:

TensorFlow is an open-source machine learning platform that automates the entire process. It has a broad, flexible

ecosystem of tools, libraries, and community resources that enable academics to improve the state-of-the-art in machine learning and developers to swiftly build and deploy machine learning applications. The TensorFlow APIs are organized hierarchically, with higher-level APIs built on top of lower-level APIs. Machine learning researchers use low-level APIs to create and test new machine learning algorithms. Using the tf.keras high-level API, you will define and train machine learning models as well as make predictions in this session. keras is a TensorFlow variant of the open-source API.

II. HTML&CSS

HTML is divided into two parts: hypertext, which provides links to other text, and markup, which defines the structure and appearance of the raw text. A fully functioning human body can be likened to an html only web page. Html only web page has all the basic building blocks, but aren't very appealing because they lack unique accessories or styles. It is also a body that cannot move or communicate even at this moment. To apply styles to your website, you need to associate CSS functions with HTML text. CSS tells the browser how to render existing HTML.

JavaScript:

We have used JavaScript for the facial recognition using CNN networks. We have used face api.js which will work on JavaScript that will extract our facial emotions using tensor flow algorithm. That will extract facial expressions from eyebrows, eye expression, nose and mouth positions. At last, that will be calculated and our final or major expression of the face is recognized and That expression will be captured and given to the database, which will recommend our facial expression songs.

JavaScript is controlling the website's behavior. Understanding the differences between JavaScript and Java is critical. JavaScript is a scripting language for changing web pages and creating interactive functionality. Without JavaScript, a website will still function, but only to a limited extent

PHP:

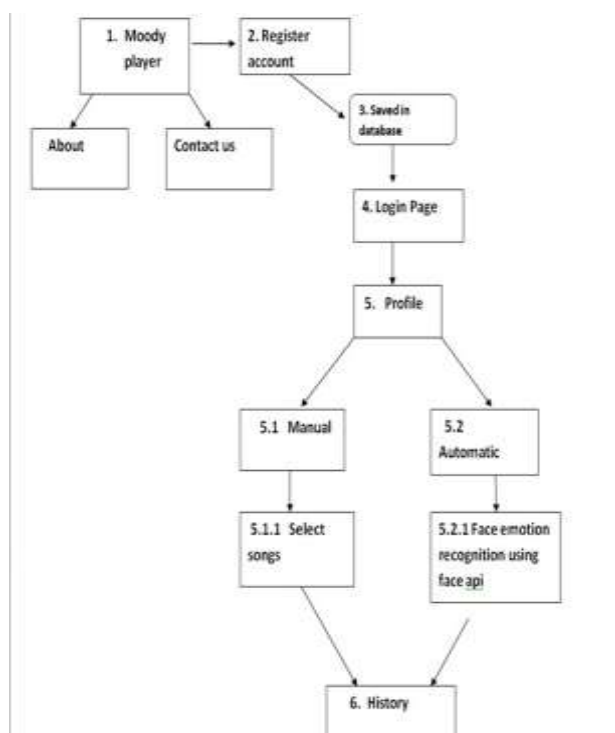
php is used to link the front end with backend. All the data or inputs we enter on the interface will be sent to the backend(database) by php only.so that when registering accounts our data we enter on html page will be sent to database by php only and when logging in the username and password we enter will be matched with database by using php

only. So php will play an important role in this project

Interface:

At first after opening the interface homepage will be opened. So, we can login with user id and password by this we can have secure interface which others cannot access our account. We are having two modes one is manual mode and Automatic mode (Face emotion recognition mode). In manual mode we are having different moods of songs so we can listen the songs manually without face detection we can add songs in the playlist so we listen songs which we like. In emotion mode the face expression is captured and it will detect our state of mood and it open the songs our mood. The songs which are listened are saved in the history so we can listen the songs again.

Flowchart:



III. CREATE ACCOUNT/SIGN UP

Everyone has to listen the songs through their account. So first one has to create the account, for that they have an option 'create an account'. The details are saved in the database. We have used PHP for taking the registered account details of the user and for sending those details into database. so here we are using PHP to connect the frontend with backend.

Login:

Once we create the account we have to login to our account. Here the account details that are already saved in the database will be matched with the account details that

user enter. If they are matched the login will be success and user will be redirected to the user profile page. So once the account login successfully then the PHP session with the username of the user will be active till the time, he gets logout.

Profile page:

Once the user has successfully login, he will be redirect to his profile page. In profile page the user will have two options:

- 1) manual mode
- 2) emotion mode.

If the user selects manual mode, then he is redirected to select songs page where the user has to select the songs of his own choice. If the user selects emotion mode, then he will be redirected to face emotion recognition page where we have used face api in JavaScript for recognizing the emotion of the user from his face.so once the face emotion of the user is recognized which may be happy, sad, angry, neutral, surprised, fear. So once his face emotion is recognized he will be redirected to select songs page where songs will

be recommended to the user basing his facial expression.

In this project to recognize the face emotion we have used Face-api.js is a JavaScript API built on top of the tensorflow.js core API for face detection and recognition.

TensorFlow algorithm is used in this project for Facial detection and recognition of faces and face landmarks are solved using convolutional neural networks in the face-api.js JavaScript module. Face-api.js is a desktop and mobile web application that uses TensorFlow.js. Face detection, face landmark detection, face recognition, and facial expression recognition are just a few of the models accessible with face-api.js. In this the facial expression is taken by analyzing the eyebrows, eyes nose position and mouth position. By taking this all into consideration the face api.js will find the emotion it will calculate all emotions and it will pick the emotion of majority one and that emotion is recognized as user emotion.

IV. HISTORY

Once we listen to the songs that may be in manual mode or emotion mode, the category of song listened by user that is happy or sad or angry or neutral or surprised will be recorded in history section with the date and time at which the user has listened to that song.

Feature Extraction:

A Face API is made up of two layers: input and output. On the basis of the training dataset, Face API will classify the features.

- i. The eyelids flutter
- ii. Distance between upper eyelid and eyebrow
- iv. The distance between your eyebrows
- iv. The top of the eyelid
- v. The width of the mouth
- v. Open Mouth

V. CONCLUSION

Moddy player helps the user in changing his/her mood by recommending the right music for their mood. In a stressful lifestyle through which people of this generation work, moody player helps them to relieve from such situations through music.

Future scope:

Image capturing can be made more efficient in low-light circumstances. It is feasible to make a playlist that is more accurate. It is feasible to create a device that is even smaller. The situation of a person can be taken by their facial expressions. Without a doubt, the most natural way to express emotions is through facial expressions. Humans have a proclivity to link the music they listen to the emotions they are feeling. Song playlists, on the other hand, can occasionally be too large to sort out automatically. If the music player is "smart enough" to organize the music according on the person's current emotional state, it can be a big help. The study's purpose is to look into the effects of various drugs.

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