

## Survey on Emotion Based Music Player

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**Abstract**— Human face is an very important organ of an human body and plays a chief role in drawing out an individual’s behavior and emotional state. seprate list of songs and creating a relevant list of songs based on an individual’s sentimental features is very dull, time consuming and sustain task. Algorithm have been implemted for automating the playlist generation process. This proposed system based on emotion based music player extracted will produce a playlist without human control thereby reducing the time efforts in rendering the process manually. Android the world’s most popular mobile so, designed primarily for touchscreen mobile devices such as smartphones and tablets. Emotion based music player has different applications in areas such as artificial intelligence, image processing, intelligent human computer interfaces. This paper reviews the literature on different characteristic like different theories of sensation methods of detecting emotions like face detection, eye detection, lip detection. This paper reviews comparative craftsmanship for recognizing emotions via images.

**Keywords:** Emotions, Emotion Detection, Face Detection, Artificial Intelligence, Image Processing, Intelligent Human Computer Interfaces, Eye Detection, Lip Detection, Images

### I. INTRODUCTION

Human cognition depends primarily on the ability to perceive, interpret, and integrate audio-visuals and sensing information. Researchers are attempting to add more ability to computers that will allow them to associate like mortal, admit human presents, talk, listen, or even guess their feelings. They are face detection, feature extraction, feature classification. The features considered while detecting emotion can be static, dynamic, point-based geometric, or region based appearance. Facial expression is one of the efficient ways to express emotions and feelings. Research demonstrates that facial expression supply to about 55% effect of general emotion expression through social communications. Ekman and Friesen have proposed a fundamental facial identification method which is used to categorize the given facial image into the common expression type such as happy, sad, disgust, surprise, fear, angry and neutral. Now in the present Manner. Music plays a very important role in enhancing an individual’s life as it is an important Medium of entertainment for music lovers and listeners.



Fig. 1:

Emotion	Definition	Motion of facial parts
Happiness	Happiness is been known as the most desired appearance by human –beings. sub-coordinates of happiness are joy, thrill, cheerfulness , merry and glad	Lip corner pulled upside ,open eyes ,cheeks raised and wrinkle around eyes
Sadness	Sadness is the felling of helpless and an incompatible emotion of joy. subordinate are nervous ,hurt, despair ,sorrow and disappointment	Lower corner of mouth and raise inner portion of their brows.
Surprise	Unexpected things express surprise felling. Sub coordinate of surprise are astonishment, amazement.	Open eyes ,mouth open up, jaw dropped and eyebrows up
Anger	One of the most horrible emotions is anger. This emotion must be ignored as it is very harmful. subordinate of anger are hate, dislike ,irritation and annoyance	Eyebrows are pulled down, teeth are tightly shut and lipstighted , lower lids pull down

Fear	Fear is the condition of afraid state. Sub coordinate of fear are panic, afraid, scared, horror, terror, fright.	Eyebrows are raised and pull together ,raised upper eyelids ,lips a bit tensile and horizontally back to ear
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Emotions and then for playing the songs user has to manually select a specific sentiment. Facial expression analysis is mainly divided into two types images based and video based. Human Computer Interaction (HCI) focus at remarkable interaction between mortal and machines by body gestures, eye gaze, speech, facial expressions, cognitive modeling etc.

## II. LITERATURE SURVEY

Charles Darwin is the first scientist to acknowledge that facial expression is one of the robust and instant means for human being to communicate their emotions, intentions and point of view its out look to each other. In 1872, Darwin issued The Expression of the Emotions in Man and Animals, in which he state that all mortal, and even other animals, show sentiment via remarkably similar habits .Rosalind Picard (1997) narrate why emotions are key to reliable computer access . Not only are sentimental state is pivotal for multi-step process for making choices between alternatives as Picard narrates , but emotion detection is a major step to an adaptive computer system. Various techniques and true extraction technique considered only the shape or major prominent points of some important facial features such as mouth and eyes. They work by doing facial expression detection system input performed offline by taking photograph of a subject with nearest position from the camera where facial position should not be tilted. They use Artificial Neural Network Back propagation method for facial expression detection. The paper states that a way to automatically detect the mood of the user and generate playlist of songs which is suitable for the current mood.

This paper primarily points and nucleus on resolving the demerits mentioned in the existing system by designing an automated emotion based music player for the generation of customized playlist based on user extracted facial attribute and thus abstain from the utilization of any additional hardware. It also exclude a frame of mind randomized and appetizer function that shifts the mood give rise to playlist to another same level of randomized mood generated playlist succeeding some time span.

## III. PROPOSED SYSTEM

Works by first providing a simple enough interface which prompts the user to scan the memory for audio files when the application is opened. Emotion, the music will be played from the predefined directories. Emotion based music player is based on the idea of automating much of the interaction between the music player and its user. .Emotion based music player is a music player which play songs according to the emotion of the user. User independent and user dependent emotion classification. User independent experiments were carried out for 30 individuals. Proposed system is tested and experimented against an in-built camera Average estimated

time for various modules of proposed system. Emotion Based Music Player on the current emotional state and behavior of a person, existing systems possess a lesser accuracy in generation of a playlist. The music player will then play the songs according to the category of emotion detected. This proposed system is of great use for the user having a large playlist. The System requires only the user expressions to play the songs. There are three module Emotion extraction module, Audio feature extraction module and an Emotion-Audio recognition module. The bio metric based authentication systems iris image, fingerprints and thumb prints are used, but our focus is to use owner's face image for the making owner 's emotion level normal by playing song. Eye shape features are extracted by using Active Appearance Model (AAM). Face expression analysis deals with visually recognizing and analyzing different facial emotions and facial feature changes.

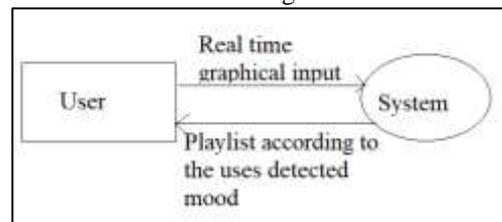


Fig. 2: DFD 0 Level

## IV. METHODOLOGIES

The proposed algorithm in this involves an emotion music suggestion that provides the generation of a customized playlist in accordance to the user's sentimental state. Three major modules are involved in the proposed system. Emotion extraction module, audio feature extraction module and an emotion –audio recognition module, in this emotion –audio recognition carry-out the mapping of modules by querying the audio meta-data

User Emotion	Music Mood
Neutral	Calm and refreshing
Happy	Happy and elated
Sad and melancholy	Serene and soothing
Energetic	Exciting and energetic

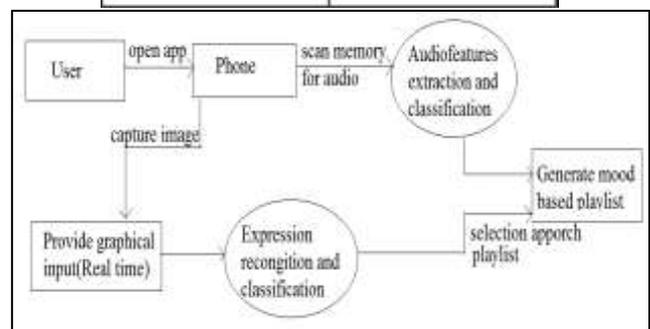


Fig. 3: DFD 1 Level

Facial expression recognition and audio emotion recognition modules are two mutually entire modules. The system integration module maps the two sub-spaces by

interpreting and querying a meta-data file. It is composed of meta-data connected to the whole lot audio file.

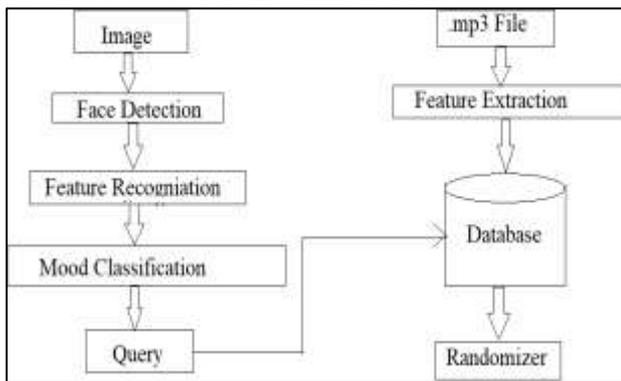


Fig. 4: Architecture of emotion based music player

#### V. CONCLUSION AND FUTURE SCOPE

Future scope in the system would be to design a mechanism that would be helpful in music therapy treatment and furnish the music analyst the help needed to treat the patients suffering from disorders like mental stress, anxiety, acute depression and trauma. Proposed system also trends to ignore the future situation occur in future the unpredictable results produced in extreme bad light conditions and very poor camera resolution. This project has been developed to give us great advancement in the field of machine learning technology. EMO player fulfills to sort out the music based on the emotions of the user such as whether it is happy or sad. Facial expressions are a great indicator of the state of a mind for a person. Indeed the most natural way to express emotions is through facial expressions. By using Emo player we can easily play the songs according to the emotion of the user.

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