

# Emotion Analysis Based Intelligent Music Player using Android System

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**Abstract**—This paper conveys our proposed intelligent music player using sentimental or emotion analysis. The Emotions are part of human nature. They play vital role in all the aspects of life. Human emotions are meant for mutual understanding and sharing feelings and intentions. The emotions are manifested in verbal and facial expressions. One can also express his emotions through written text. This paper mainly focuses on what are the methodologies available for detecting human emotions for developing emotion based music player, which are the approaches used by available music players to detect emotions, which approach our music player follows to detect human emotions and how it is better to use our system for emotion detection. It also gives brief idea about our systems working, playlist generation and emotion classification.

**Keywords** - *Playlist generation, emotion recognition, classification, emotion database, emotion detection.*

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## I. INTRODUCTION

Feelings are a piece of human correspondence. State of mind, sentiments and identity of any individual can be perceived through his feelings. Individuals have constantly discovered music huge in their lives. Music is a dialect of a feeling. Music regularly communicates enthusiastic qualities and characteristics of human identity, for example, upbeat, misery, forcefulness, delicacy and so on. Music has a focal part in human culture since it so firmly brings out emotions and influences social exercises and communications. Astute music player is an android application which perceives a state of mind of the client and after that as per his mind-set it produces playlist of melodies that suits his temperament from the accessible tune list.

The key distinction between numerous other shrewd music players and our music player is the type of info it takes. Other music players require either a picture of client, voice of client or content from client to perceive state of mind of client. The real issue with these frameworks is that they require a ton of contribution from client i.e. client needs to waste more opportunity for giving information which may make utilizing them grim. Be that as it may, our framework can perceive temperament of client by perusing the verses of the melody. Subsequently, little connection with client can likewise give sought results.

## II. LITERATURE SURVEY

The idea - Emotions can show up in many parts of human-to-human correspondence and regularly give extra data around a message. As some feeling expressions are socially free even in a remote dialect where we don't comprehend the importance of words it is moderately simple for anybody to perceive shock, alarm, outrage, and so on in the message. Additionally in the portrayal of our face looks it is not all that critical in the event that we experienced childhood in USA, Britain or China, the greater part of such appearances are fundamentally the same as and have a comparative significance. The issue emerges with content archives. Any sentence or record is emphatically subject to the dialect it was composed in. Likewise comparable dialects have regularly distinctive spelling and frequently additionally

somewhat diverse. Music and its utilization for feeling direction forms, still remains an unanswered inquiry. Numerous test designs including its every day life use and clinical applications crosswise over various societies and mainlands have protected music as a self-regulative device.

Music mediation and feeling control measures were seen and included just when at any rate types of music investment (singing, playing, tuning in, and engagement) were noted in the study and consequences for feeling control were straightforwardly measured. The interrelations between the impacts of music on feeling direction and the utilization of it as a deliberate instrument, e.g. instructive or remedial capacities, yielded constrained results, music mediations for particular. Music has a regulative limit of itself, yet is bound as significant instrument for particular feeling control intercessions.

In this way, music tunes in the late years have turned into a prevalent decision to delineate human feelings. At first, it was a dreary undertaking to mark melodies in view of the feelings they delineate from an accumulation on substantial database of tunes. Be that as it may, sound and verses of tunes get to be methods for separating the feelings and recognized the diverse human feelings. Likewise, it is realized that people see feelings inside music in an unexpected way. Knowing the numerous current methodologies for demonstrating the ambiguities of musical state of mind, a complete framework would need to join some level of individual profiling to alter.

Existing System Mood Player application utilizes face discovery and disposition acknowledgment to decide the client's temperament and in light of this, it gives a customized play list. The face identification calculation depends on OpenCV library and the state of mind location part will be founded on example coordinating. On the off chance that we know the data which is required, we utilize the last.fm database which joins each tune with labels that portray it. These executions are outlined so as to create a playlist as per the client states of mind and offer these functionalities.

This application offers the following functionalities:

- Listen to over 100 mood playlists.
- Share your mood and music with your friends on Facebook and Twitter

## II. PROPOSED SYSTEM

The working of the system is to recognize the emotion from textual information and provide a music play list from the music player according to mood of the user. Textual information can be collected from the user when user plays any song from the play list of music player. We then identify lyrics of song and with the help of classification techniques; emotions can be extracted from lyrics of song by emotional keyword and semantic information. After mood identification system will provide music playlist to the user and according to his /her mood selected song will be played. This system will also ask user if he wants to change the mood and wants another play list.

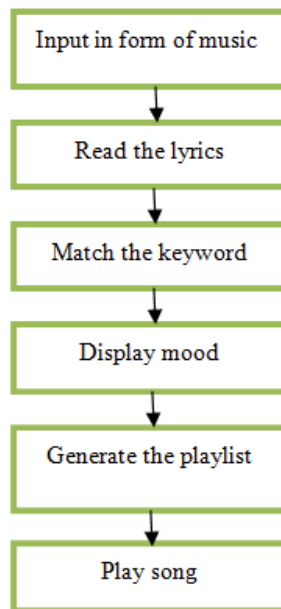


Fig. 1. Flow of an Intelligent Music player

A. Verses perusing: Lyrics of a tune contain logical data. By removing the full of feeling estimation of verses one can get extra data identified with the mind-set of client. At the point when client plays any tune from his playlist, utilizing tunes verses property we can acquire verses of a tune in literary configuration. We can then read these got verses to identify feelings.

B. Feeling and catchphrases: Once we have verses of tune in literary organization, we can contrast a portion of the watchwords and our officially grouped feelings. With this we can distinguish the state of mind of a tune.

C. Playlist Generation: After distinguishing an inclination of a melody, playlist relating to the mind-set will be shown to the client. Playlists will incorporate melodies of various classes like the playlist of tunes to be played if inclination of client is cheerful focused or pitiful, and so on.

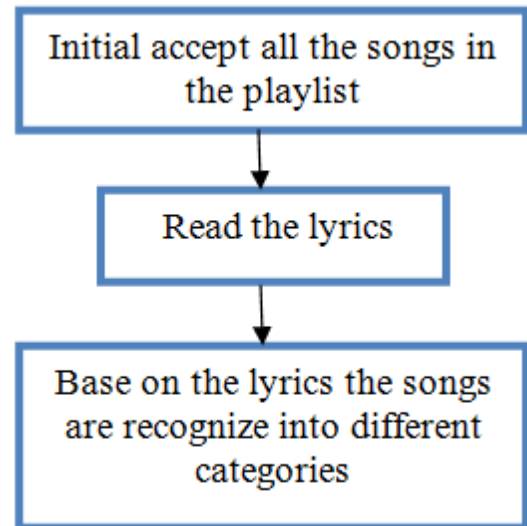


Fig. 2. Flow of an Intelligent Music player database

The core of our project is to recognize the emotions from lyrics of the played song and provide a music playlist from the music player according to the mood of the user. The system offers following:-

- It Recognizes mood or emotion of the user.
- It offers suitable play list to the user.
- It will play a suitable music.

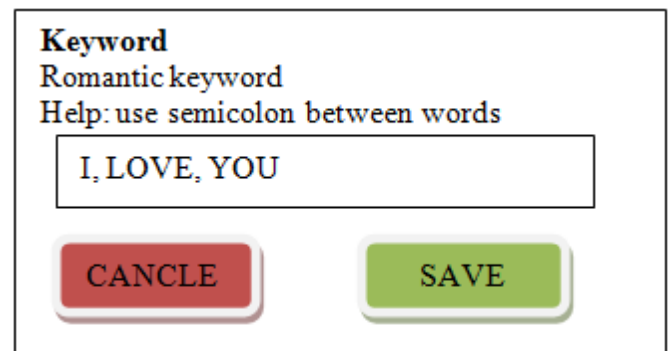


Fig. 3. Application developed

The result of the proposed framework is talked about underneath:

- A capacity to apply information of Artificial insight and IT advancements for making an android application.
- A capacity to utilize an insight strategy to create music player which will play the tune as per the clients inclination.
- A capacity to apply designing and administration information and systems to create easy to understand and superb music player.
- A capacity to dissect the issue of existing applications and build up another application..

## III. ASSOCIATION RULE & MINING

Affiliation principles are if/then articulations that reveal connections between apparently random information in a social database or other data archive. A case of an affiliation tenet would be "If a client purchases twelve eggs, he is 80% liable to likewise buy milk."An affiliation principle has two

sections, a predecessor (if) and a resulting (then) a precursor is a thing found in the information. A resulting is a thing that is found in mix with the predecessor.

Affiliation principles are made by examining information for incessant if/then examples and utilizing the criteria Support and certainty to recognize the most imperative connections. Backing means that how much of the time the things show up in the database. Certainty demonstrates the quantity of times the if/then proclamations have been observed to be valid.

#### A. Methodology

The issue of affiliation guideline mining is characterized as: Let  $I = \{i_1, i_2, \dots, i_n\}$  be an arrangement of parallel traits called things. Give  $D = \{t_1, t_2, t_3, \dots, t_n\}$  a chance to be an arrangement of exchanges called the database. Every exchange in "D" has a novel exchange "ID" and contains a subset of the things in 'I'. A guideline is characterized as a ramifications of the structure  $(X = Y)$  where "X" and "Y" has a place with "I" and "X" convergence "Y" is an invalid set. The arrangements of things (for short thing sets) "X" and "Y" are called predecessor (left-hand-side or LHS) and resulting (right-hand-side or RHS) of the principle separately. To outline the ideas, we utilize a little case from the store area. The arrangement of things is  $I = \{\text{milk, spread, bread, beer}\}$  and a little database containing the things (1 codes nearness and 0 nonappearance of a thing in an exchange) is appeared in the table to one side. An illustration guideline for the general store could be  $[\text{bread, butter}] = [\text{milk}]$ , implying that if spread and bread are purchased, clients likewise purchase milk. The snapshots of the application developed are shown in below figures.



Fig. 4. Snapshot 1

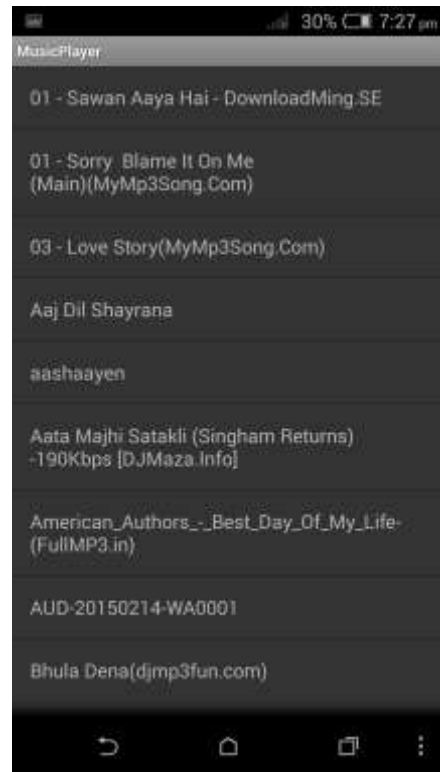


Fig. 5. Snapshot 2

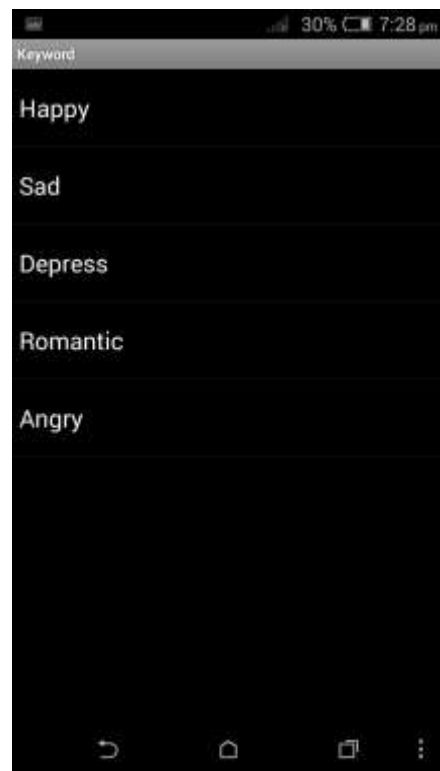


Fig. 6. Snapshot 3

#### IV. CONCLUSION

Recognizing musical mood remains a challenging problem. In the past 5 years, the performance of automated systems for music emotion recognition using a wide range has advanced significantly. Most of the media player provide list of songs in user's music library and option to select or

search the song but it becomes increasingly difficult task. Our system will provide better enjoyment to the music listeners by providing the most suitable or appropriate song to the user according to his current mood. In this paper, we present a proposed system and an approach for the automatic creation of mood based playlist. The proposed system will reduce the efforts of user in creating and managing playlist it will not only help user but also the songs are systematically sorted.

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