

Emotion Based System for Music Player and Books Reading

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ABSTRACT: This system represents a method to automatically detect emotional duality and mixed emotional experience using Linux based system. Coordinates, distance and movement of tracked points were used to create features from visual input that captured facial expressions, head, face gestures and face movement. Spectral features, prosodic features were extracted using the camera. Espeak and Pytsx and Face API are used for calculation of features. A combined feature vector was created by feature level fusion and cascade classifier was used for emotion detection. Live participants and actions are to be used for recording simultaneous mixed emotional experience. As per calculated result system will play songs and display books list & video suggestions.

KEYWORDS: Smart Emotion, Face Detection, Emotion Prediction, OpenCV.

I. INTRODUCTION

Emotion recognition has vital applications within the field of drugs, education, marketing, security, and police investigation. Machines will enhance the human-computer interaction by accurately recognizing the human emotions and responding to those emotions. Existing analysis has primarily examined automatic detection of single feeling. However, scientific discipline and behavioral science studies have shown that humans will at the same time expertise and categorical mixed emotions. For example, an individual will feel happy and unhappy at a similar time. During this analysis mixtures of six basic emotions (happiness, sadness, surprise, anger, fear, disgust and neutral state) were used. This system aims are to develop options that capture knowledge from facial expressions to spot multiple emotions. Just in case of single-label categorization drawback every annotated feature-vector instance is simply related to one class label. However, the multiple concurrent emotion recognition is a multi-label classification problem. In a multi-label problem, each feature vector instance is associated with multiple labels such as presence or absence of one of each six basic emotions. The multi-label classification is receiving increased attention and is being applied to a many domains such as text, music, images, and video based systems, security and bio informatics. This system examined recognition of concurrent emotional ambivalence and mixed emotions. Additionally, the study examined two concurrent emotions (emotion duality) to limit the scope of the research based on availability of scenarios.

II. RELATED WORK

Currently, there are no dedicated applications to suggest songs based on emotion of user. There are also very few applications that focus on the user preferences and recommendations, and these are not Customizable, like All Music. Other applications suggests predefined (not user-specific) song play-lists. An application like moodfuse include features like manual selection of songs, partly shuffle, playlist. Some popular music applications like Saavn, Spotify provide users defined playlists that needs to be created and updated manually. All of these applications focus on general categorization rather than specificity to every user. A dedicated application that focuses more on user preferences, priorities, and the creation of dynamic playlist is required to optimize the user experience. It should contain user specific play-list generated based on the usage and should be efficient in categorization. Many widely used Facial expression categorization techniques like Viola and Jones, etc, can be used for beginning phase to capture and

determine the user's emotion, but these techniques have high computational requirement. The alternative is to use a local host web service that process computation in the web. The proposed system uses, Affective fisher face algorithm for face recognition & The Local Binary Pattern Histogram(LBPH) algorithm is a simple result on face recognition problem, which can recognize both front face and side face. for emotion recognition, a system that has already analyzed emotions from over five million faces. This fisherface algorithm helps the application capture, and determine emotion from a picture. Later, this emotion can be used to organization of user's playlist.

III. PROPOSED SYSTEM

Music plays a very important role in human daily life and modern advanced Technologies the difficulties integration of large playlist can overcome here. This system itself select songs according to the current mode of the user.

User: Use this system.

Server: Connection between User and database

Database: Storage of information related to Facial characteristics, songs and books uploaded.

Our system has mainly three modules, user module, mood detection module and video suggestion module. Various processes involved in these two modules are:

User Module:

User can use system and store songs and books library in the system.

Mood detection Module:

As per the facial expression it will recognize mood of user it will show songs list or books library and it will also give video suggestion

Video suggestion Module:

According to the users mood it will give the suggestions of videos.

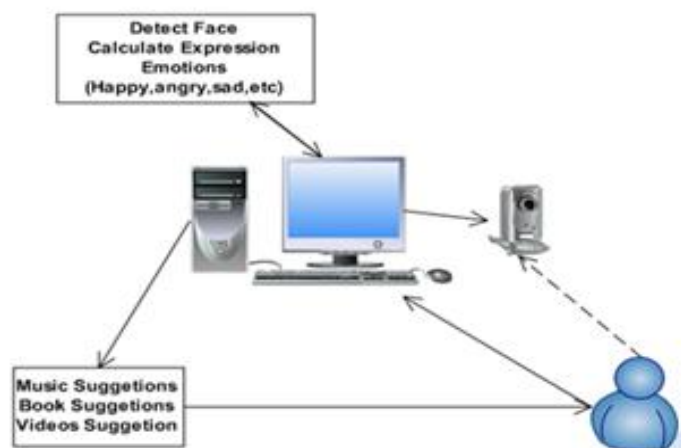


FIG1.SYSTEM ARCHITECTURE

IV. IMPLEMENTATION & RESULT

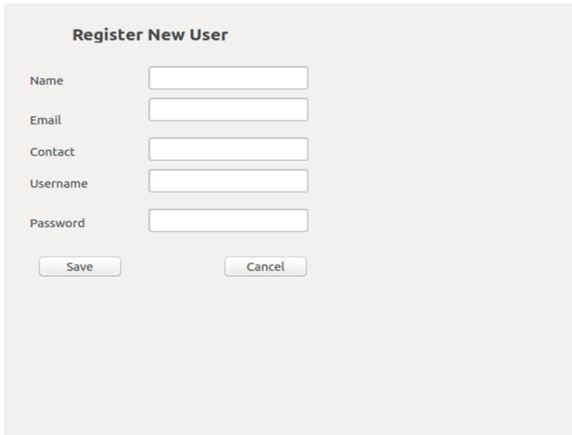


Figure 1: Registration

The user need to register him or herself if he or she is new to the system with some information asked in registration form

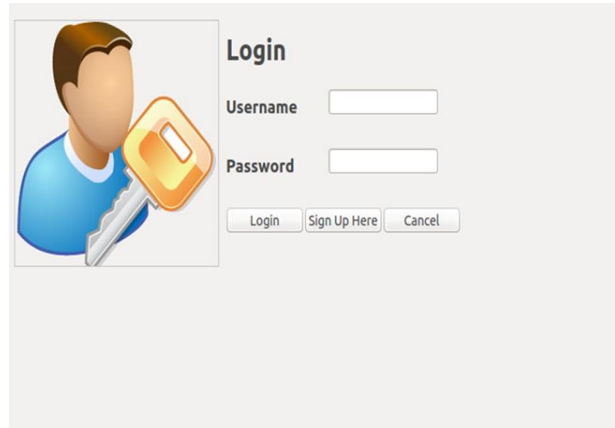


Figure 2:Login

In login window the user must login with the in username and password which has been used in the registration form. Login panel is used to validate the user.

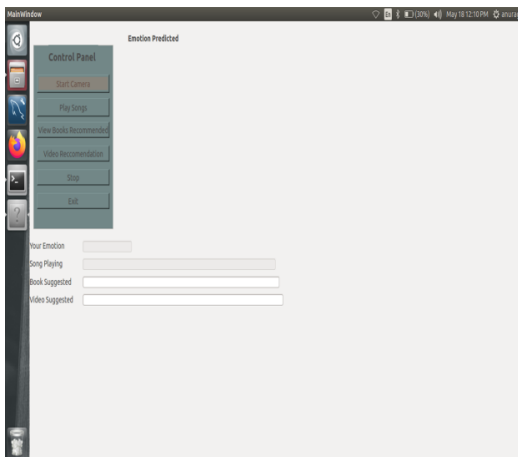


Figure 3:Control Panel

The control panel consist of the start camera to detect motions. Video and the book suggestion are been included for the user.

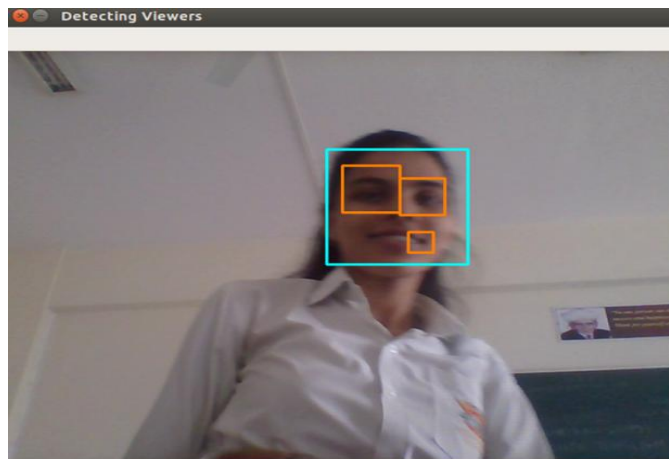


Figure 4: Face Detection.

When the user will click on Start camera button in the control panel the camera will be started and through the camera the system will detect

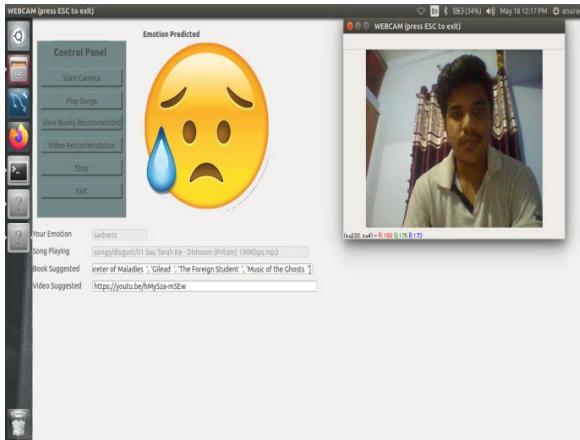


Figure 5 :Sad emotion

Once the camera is on the system will detect the expressions of the user and if the user expression is sad it will reflect with sad emoji and songs will be suggested with books and video links.



Figure 6:Happy emotion

Once the camera is on the system will detect the expression of the user and if the user expression is happy it will reflect with happy emoji and songs will be suggests with the books and video links.

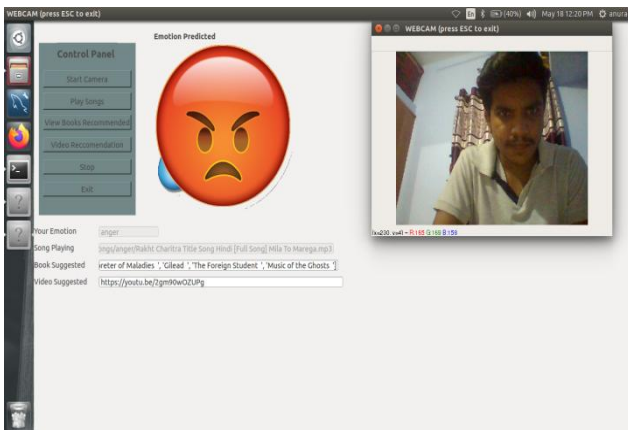


Figure 7: Angry emotion

If the user has an angry mood so the system detects the mood of the user by using users expression and suggests song to play ,books and video links.

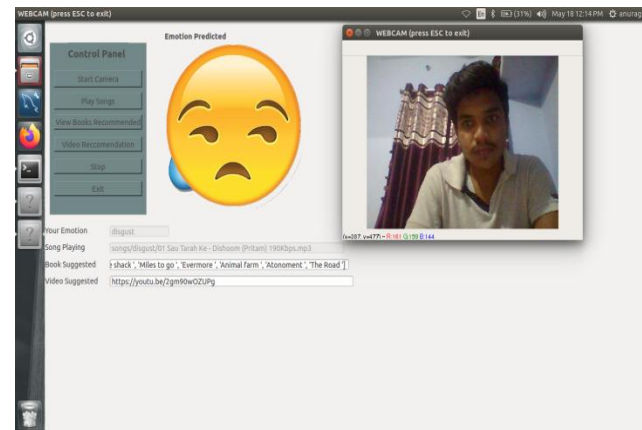


Figure 8: Disgust expression

If the user has an disgust mood so the system will detect the mood of user by using the users expressions as input and suggests song to play,books and video links.

V. CONCLUSION

Music is a vital means of regulating mood in various everyday situations. Proposed system is quickly available to everyone and may be listened to almost anywhere. System is directly dependent upon Facial Expressions of user , so it's very effective.

VL.FUTURE WORK

The future scope in the system would to design a mechanism that would be helpful in music therapy treatment and provide the music therapist the help needed to be treat the patients suffering from disorder like mental stress, anxiety, acute depression and trauma. The proposed system also tends to avoid in future the unpredictable result produced in evil light condition and very poor resolution camera.

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