Automatic Music Player based on Human Emotions using Face Recognition

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Abstract — Nowadays, almost everything is computerized, which defines the term "digital world". Without computers we can't even survive these days. In order to interact with computer, blue eyes technology is introduced. It is a system programmed with perceptual and sensory abilities, i.e., "giving human abilities to systems". This helps the computer to sense one's mood and current position (in terms of feelings and needs) with the help of their facial expression and touching mouse. The technology uses image processing, face recognition, age tracking and speech recognition techniques. This paper explains a new technique known as emotion sensory technique which helps the system to identify the user's mood (say happy, sad, angry, surprise and etc.) with cloud storage and authentication. This technology helps in developing a more user friendly and effective communication between human beings and computer.

Keywords — *Blue Eyes; Images; Emotion; Facial Recognition.*

1. Introduction

Emotion mouse checks the blood pressure level, heart rate, pulse, etc. The major advantage in this technology is to reduce our stress by playing music based on their relevant mood. Because, nowadays Information Technology (IT) peoples are stressed a lot in their field, not only in IT but in all sectors [1]. They are pushed towards deadlines that makes human stress. So the Blue Eyes technology gives you stress free world. Research on this area is widely increasing. Neuroscience, Medicines, Sociology and etc. are the areas using the initial stage of this technology [2]. It makes a robust communication between the users and the system [3].

2. Existing System

The existing systems consists of various methods to recognize the emotions and an automatic music player is also introduced. It gets the snapshot of the users and extracts the required portions for analyzing the emotions. There are many methods available for recognizing the emotions. Some of the methods are face recognition, voice recognition, emotional mouse and etc. These methods only detects the emotions by the way of getting snapshot of the users. If the snapshot is perfect, then only the system can give correct answer, otherwise it will leads to an error [4][5].

2.1 Disadvantages of Street Light System

- There is no specific high quality data storage.
- Data logger module will reveal the data.
- It takes much time to compute the results.

3. Proposed System

This system is fully based on emotion sensory systems. Implementation of high capacity of storage makes us to store *n* number of data. It helps to find various emotions and also fetch the data of the same user instead of analyzing again and again. It avoids the redundancy of data. If some user who uses the system regularly, the system has to analyze the mood of the user and to store them. This leads to increase in storage space. Instead of the normal database, we implementing cloud storage. It is more secure than the data logger and also it stores the huge amount of data [6].

3.1 Advantages of Proposed Street Light

- It is more secure than the data logger.
- It stores the huge amount of data.
- Reliable and secure connection.
- Improved subjective speed and ease of use.

4. Methodology

In this system, it will get the snapshot of the user. Then the image is transferred to cloud database. The image will be checked to find whether the image is already available or not. If it is available in cloud storage there will be some previously analyzed moods. So, it will directly transfer to music player. If the snapshot is not available in the database, it will save and forward it to another level of process for detecting mood. The application will detect the mood and also the data is updated to the cloud storage for future use. Finally, the music player will play a song according to the detected user's mood. In advance the music player will display the playlist from that the user can also select the specific song from the playlist.
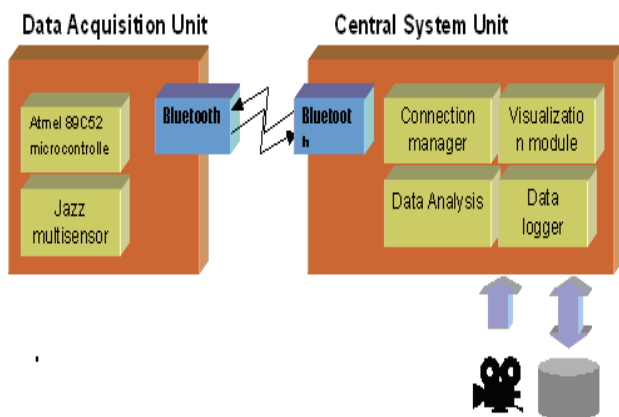
Fig.1: System Overview

Sensors are used to sense the human emotions. Sensor can have many type physiological sensor, jazz sensor and etc. All these sensors are used to find different emotions of the humans. Bluetooth device are used to establish a connection between data acquisition and central system unit.

Connection Manager: It handles the connection between two devices. The connection manager only helps to communicate with the other components of the system

Data Analysis: It analyzes other working operations which will detect pulse rate, blood pressure, etc..,

Data Logger: It keeps the data use of cloud storage with high security. It saves all data for future use and also its fetches the data fast.

Visualization Module: The module provides user interface for the supervisors. All the incoming alarm messages are instantly signalled to the supervisor. Moreover, the visualization module can be set in offline mode where, the data is fetched from the database.
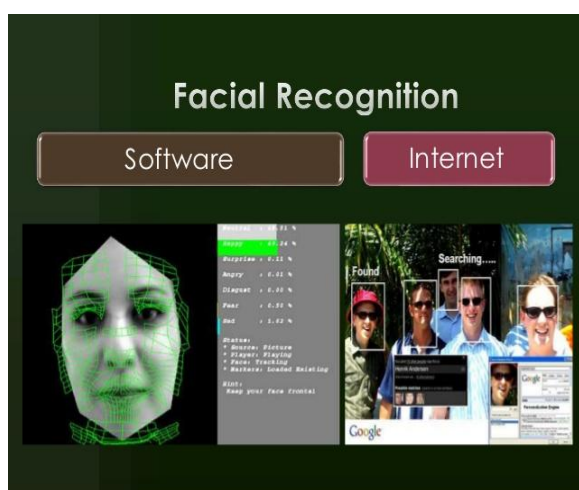
4.1 Working Model

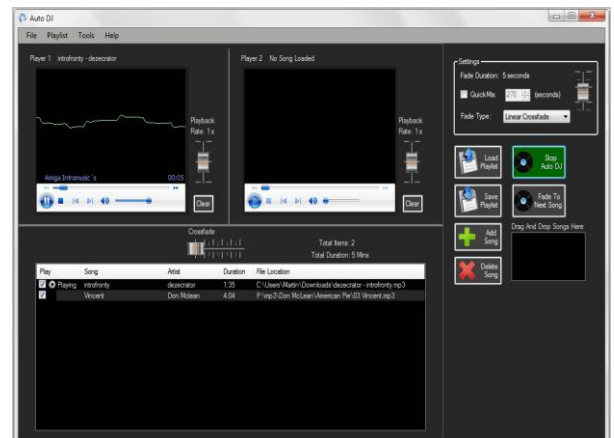

Fig. 2: Facial recognition

Fig.3: Discussiion on music player working

This figure shows how the system gets snapshot of the user and searches the mood. Finally it will detects the mood of the user and the songs playlist will appear in front of the user, where the application automatically plays a song or else the user can also select the songs [2][7].

The songs are played according to the users mood. Even when our mood suddenly changes, it will again process for the exact song for the mood.

- The lists of options are given to the user to maintain his/her song collection. The user can perform add media operation, or remove the added media and can manually play the song.
- We can add new songs to the existing collection of songs using browsing window. The systems have the play button.
- The emotion detection is started by pressing the play button. If the system has detected the emotion as "Happy" the emotion specific-playlist is created. Similarly, the sad emotion is detected and new playlist is created instantly.

5. Result

The automatic music player lead to the reduction of human stress in real time. Blue eyes technology is already been used in various fields. This blue eyes technology is to supervise and update the status of the human.

6. Conclusion

In this paper, we implemented the concept of emotion sensory technique that is a part of the Blue Eyes technology. It is used to identify different emotions state of the user. It cheers up the user by playing songs.

7. Future Enhancement

In the future ordinary household devices such as television, washing machine and etc., may do their job

themselves with the help of interactive system "giving commands and make them to work". The next step is to improve the hardware for storing and retrieving large amount of data. The future of blue eyes technology is limitless.

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