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BLUE EYES-MUSIC PLAYING SYSTEM

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Abstract: - Recent studies confirm that humans respond and react to music and that music has a high impact on person's brain activity. The average American listens up to four hours of music every day. People tend to listen to music based on their mood and interests. This project focuses on creating an application to suggest songs for user based on their mood by capturing facial expressions and eyes. Facial expression and eyes is a form of nonverbal communication. Computer vision is an interdisciplinary field that helps convey a high-level understanding of digital images or videos to computers. In this system, computer vision components are used to determine the user's emotion through facial expressions and eyes. Once the emotion is recognized, the system suggests a play-list for that emotion, saving a lot of time for a user over selecting and playing songs manually. Our system also keeps track of user's details like number of plays for each song, sorts songs based on category and interest level, and reorganizes the play-list every time. The system also notifies user about the songs that are never played so that they can be deleted or modified.The world of science cannot be measured in terms of development and progress. It shows how far human mind can work and think. It has now reached to the technology known as "Blue Eyes Technology" that can sense and control human emotions and feelings through gadgets. The eyes, fingers, speech are the elements which help to sense the emotion level of human body.

Keyword:- *Emotion recognition, Computer vision, Camera, Music, Categorization, recommendations.*

I INTRODUCTION

A world where humans interact with computers having emotion in it is not far away. The blue eyes technology is a non- obtrusive method employing highly accurate video cameras and microphones to identify user's action [1]. The computer has the ability to interact with you by understanding your facial expressions, speech etc. Three elements helping the computer to sense the emotion level of humans is through eyes, fingers, and speech. With the help of the video cameras and microphones, the machine can understand what the user needs and his emotional states. Thus computer is made to see and feel the emotions. Real time face tracking is possible to recognize the face gestures. Gestures like, yes/no, can thus be recognized easily [2]. Computationally, our computers are deaf, dumb and blind. They do not bother about what you think or feel. It just does what we assign them. They do not have the ability to modify our comments. On the other hand, in case of a computer with emotional intelligence can recognize the feelings of the user. Such computers are able to slow down or replay a tutorial if the user seems to be confused. The emotion technology does not restrict its applications inside the desktop, but it is more than that. In a car that has an effective computing system, has the ability to recognize whether the driver is drowsy, and advice the driver to stop the car and take rest. The computer to be genuinely intelligent and interact with us must be given the ability to recognize, understand even to behave and express emotions. The technology used here itself gives information about this technology. Researcher's attempts to add even more capabilities to the computers that allow the computers to interact like humans, recognize their presence, talks, and listen, and even guess the feelings of the user [1]. The detection of the human expressions is becoming very challenging in machine learning [3]. Blue stands for bluetooth and eyes stands for the eye movements through which emotional information is obtained. Bluetooth indicates the wireless communication [1]. For carrying out an efficient man-computer interaction, the emotion recognition of humans is a significant component. It plays a critical role in communication by allowing people to express oneself beyond the verbal domain. The detection and categorization of various human emotions or different state of mind involves the analysis of emotions from human eye expression. For example, in security and surveillance, they can predict the offender or criminal's behavior by analyzing the images of their face from the frames of the video sequence. The analysis of human emotions can be applied in a variety of application domains, such as video surveillance and human –computer interaction systems. In some cases, the results of such

analysis can be applied to identify and categorize the various human emotions automatically from the videos. we never noticed that this friend of ours doesn't care for us. So imagine a world where your computer tells you to calm down when you are angry, motivate you when you are frustrated and provide all the help and pleasure that an actual best friend would do to you. If these qualities are collaborated with a computer it will not only identify our physical state but also predict emotional status and act accordingly. All this has now become possible because of an advancement in technology known as the Blue Eye Technology, Blue Eye is defined as the technology that provides means for monitoring and recording a person's basic physiological parameters, basically through this technology, a computer gains humans power and intellect. This can be applied in every working environment which requires permanent operator's attention because human error is one of the major reasons for catastrophes. Blue eye is the name derived from bluetooth which provides wireless transmission of information from sensors and Eye, the most beautiful but also the most important sensory organ of the human body; 4/5th of all the impressions on the senses come from eye. Also the eyes make an essential contribution to the facial expression and communicating with other people. Thus they play a vital role in understanding human behavior.

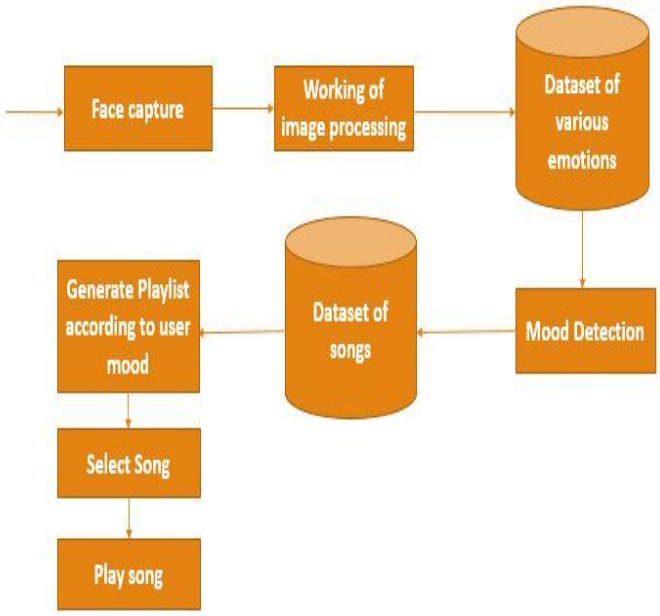
II.PROBLEM STATEMENT:-

To design and develop a system which detects the users mood and accordingly plyas the songs. which helps the users to segregate songs also by users emotion. Here we are changing the way of music lovers to listen music.

III.Design and Implementation:-

Large numbers of techniques are used to identify the emotional status of the user. According to Ekman, emotional states of a person can be represented through various techniques. A facial affect program is used, which specifies the relation between the facial muscle movements and the emotions. Ekman had used six different emotions for his experiment. Happiness, anger, sorrow, sadness, surprise, fear, are the emotions used [16]. These emotions can also be recognized from the motion of head and the facial features. According to his findings, he identified that different emotions result in different facial muscle patterns. The emotion happiness had the eyes relaxed or neutral. Anger brought the eyebrows pulled down and inward. The eyebrows were drawn together with the inner corners raised and the outer corners lowered during sadness. The eyes were also glazed during sadness. Surprise brought the eyebrows raised and curved. It is said that eyes are the window to the soul. Information about a person's internal state can be determined by just looking at their eyes. The image of the user is captured by a camera and the eye area is focused using texture filtering algorithm. These images are then compared with the image that is already stored in the database. The best image that matches the user's emotion is identified and the computer acts accordingly to make the mood of person better. There is a chance that when the face is illuminated with the light from many directions the same emotions can be felt as different even if it is seen in the same person . Robots are designed such that it understands the human and interact with them perfectly.

III SYSTEM ARCHITECTURE



Algorithm used for processing

1.Tensorflow algorithm:

Step 1 : Capture image from camera.

Step 2: Store the image into variable bitmap.

Step 3: Covert that images in pixel and stored that pixel into an int array.

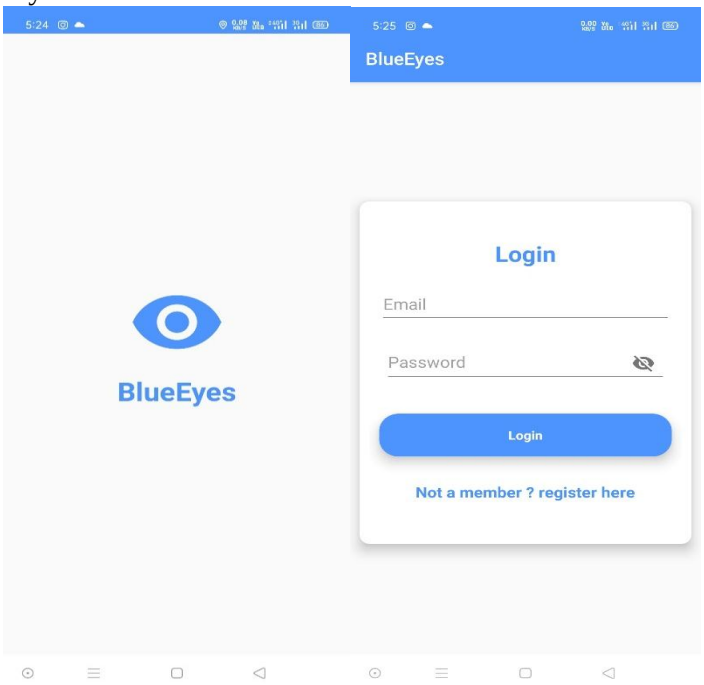
Step 4: Match the pixels from that array.

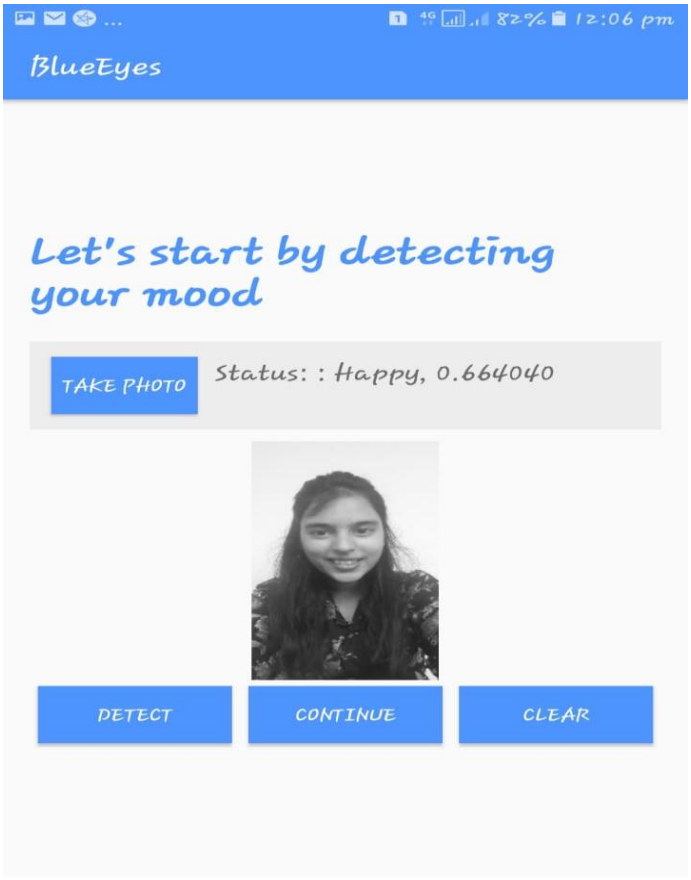
Step 5:Suggest the playlist according to the user's mood.

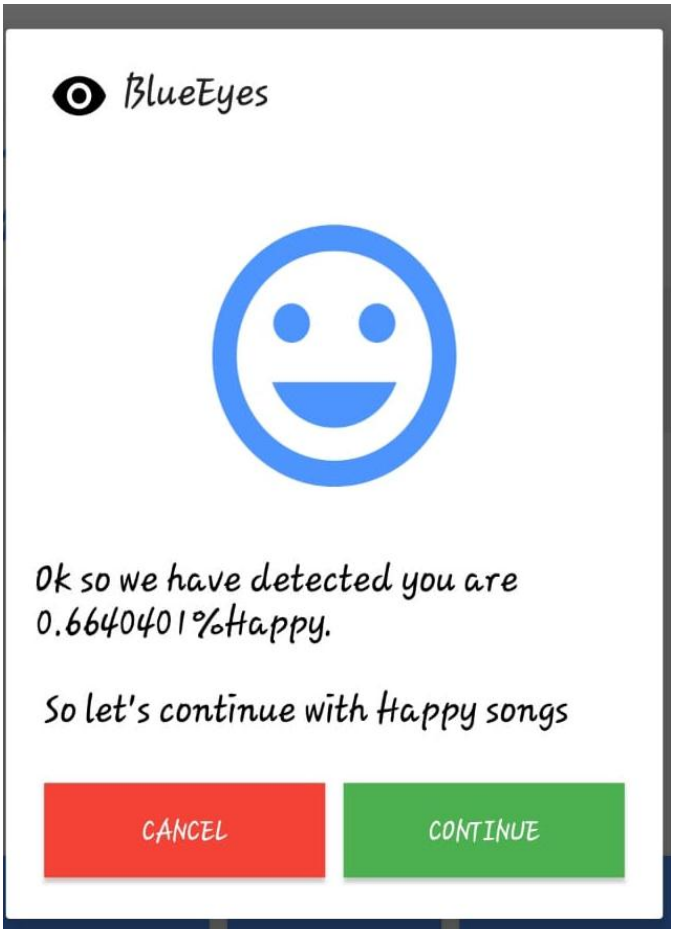
IV.SYSTEM ANALYSIS: -

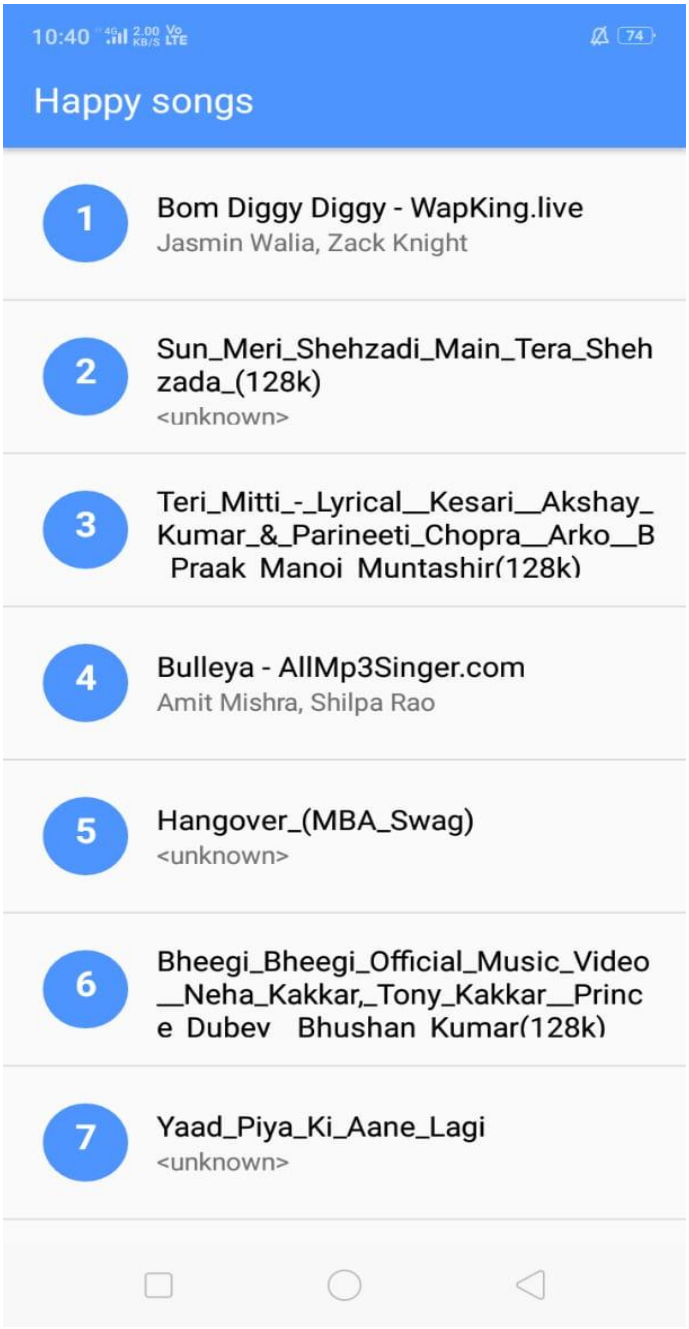
• Music Player: A portable media player (PMP) or digital audio player (DAP) is a portable consumer electronics device capable of storing and playing digital media such as audio, images, and video files.[1][2] The data is typically stored on a CD, DVD, BD, flash memory, microdrive, or hard drive. Most portable media players are equipped with a 3.5 mm headphone jack, which users can plug headphones into, or connect to a boombox or hifi system. In contrast, analogue portable audio players play music from non-digital media that use analogue signal storage.

•Database: A database is an organized collection of data, generally stored and accessed electronically from a computer system. Where databases are more complex they are often developed using formal design and modeling techniques. 1. Data definition – Creation, modification and removal of definitions that define the organization of the data. 2. Update – Insertion, modification, and deletion of the actual data. 3. Retrieval – Providing information in a form directly usable or for further processing by other applications. The retrieved data may be made available in a form basically the same as it is stored in the database or in a new form obtained by altering or combining existing data from the database. 4. Administration – Registering and monitoring users, enforcing data security, monitoring performance, maintaining data integrity, dealing with concurrency control, and recovering information that has been corrupted by some event such as an unexpected system.









Advantages:

Play According to users mood

Save time

Easy to use

Understand emotions easily

Applications:

Home Appliances: In ALEXA we can implement this technology

Medical purpose: It is used in medical purpose for treatment of patient called “Music Therapy". So that the patient will get out of in depression

V.CONCLUSION:-

In this project has been developed to give us great advancement in the field of machine learning technology. player fulfills to sort out the music based on the emotions of the user such as whether it is happy or sad . So, totally our work aims to develop a player which is based on user need and it helps to revive in case of free time or leisure time if we want to hear music based on our current situation.

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