A Review on Blue Eyes Echnology

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ABSTRACT: 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. In this technology BLUE stands for Bluetooth, which enables reliable wireless communication and EYES related to the movement of the eye that enables us to see lot of interesting and important information. The basic idea behind this technology is to give the computer the human power. We all have some perceptual abilities. That is we can understand each other's feelings. For example we can understand ones emotional state by analyzing his facial expression. If we add these perceptual abilities of human to computers would enable computers to work together with human beings as intimate partners. The BLUE EYES technology aims at creating computational machines that have perceptual and sensory ability like those of human beings.

KEYWORDS: Blue eyes sensor technology, human emotions, human body, Emotion Sensory World, Image processing.

I. INTRODUCTION

Imagine yourself in a world where humans interact with computers. You are sitting in front of your personal computer that can listen, talk, or even scream. It has the ability to gather information about you and interact with you through special techniques like facial recognition, speech recognition, etc. The eyes, fingers, speech are the elements which help to sense the emotion level of human body. It can even understand your emotions at the touch of the mouse. It verifies your identity, feels your presence, and starts interacting with you .For example, You asks the computer to dial to your friend at his office. It realizes the urgency of the situation through the mouse, dials your friend at his office, and establishes a connection. The machine can understand what a user wants, where he is looking at, and even realize his physical or emotional state.

II.RELATED WORK

In[2] We cannot measure the world of science in terms of progress and fact of development. That thing no reached to the technology called as "Blue eyes technology" which is capable to recognize and control human emotions as well as feelings with help of gadgets. The elements eyes, fingers, speech are the body parts which helps to sense the emotions of humans. The paper is going to implement a new technology known as Emotion capturing world of blue eyes technology which recognize human emotions(sad, happy, surprised) using image processing techniques by extracting eye portion from the captured image which is then matched with stored images of database After recognizing mood the songs will be played to make human emotion level normal. In [4] The basic idea behind this technology is to give the computer the human power. We all have some perceptual abilities. That is we can understand each other's feelings. For example we can understand ones emotional state by analyzing his facial expression. If we add these perceptual abilities of human to computers would enable computers to work together with human beings as intimate partners. This paper implements a new technique known as Emotion Sensory World of Blue eyes technology which identifies human emotions. In[5] Its objective at creating computational machines that have perceptual and sensory ability .In this technology actions and emotions can be identified using camcorder. The technologies used for this are Manual and Gaze Input Cascaded, Artificial Intelligent Speech Recognition, Simple User Interest Tracker , the eye movement sensor. Its main applications are Automobile industry, Video games, Medical diagnosis, Lie-detector tests. It is an emerging technology and in future it is expected to reduce the gap between electronic and physical world. In [6] Is it possible to create a computer

which can interact with us as we interact with each other? For example imagine in a fine morning you walk on to your computer room and switch on your computer and it tells you "Hey friend, good morning you seem to be in a bad mood today". And then it opens your mailbox and shows you some of the mails and tries to cheer you. It seems to be a fiction but will be a life lead by "Blue Eyes" in the near future. The basic idea behind this technology is to give the computer the human power. We all have some perceptual abilities. That is we can understand each other's feelings. For example we can understand ones emotional state by analyzing his facial expression. If we add these perceptual abilities of human to computers would enable computers to work together with human beings as intimate partners. The "BLUE EYES" technology aims at creating computational machines that have perceptual and sensory ability like those of human beings. How can we make computers "see" and "feel". Blue Eyes uses sensing technology to identify a user's actions and to extract key information. This information is then analyzed to determine the user's physical, emotional or informational state, which in turn can be used to help make the user more productive by performing expected actions or by providing expected information. In [11] The eyes, fingers, speech are the elements which help to sense the emotion level of human body. This paper implements a new technique known as Emotion Sensory World of Blue eyes technology which identifies human emotions (sad. happy. Excited or surprised) using image processing techniques by extracting eye portion from the captured image which is then compared with stored images of data base. After identifying mood the songs will be played to make human emotion level normal.

III.TECHNOLOGIES USED

A. Emotion Mouse

This is the mouse obtains the physiological data and emotional states such as Temperature, Body pressure, Pulse rate, Heart rate and Touching style, etc. ,through the touch of user on mouse where different sensors (such as Pressure sensor, Heart rate sensor, GSR(Galvanic Skin Response) sensor, Temperature sensor) are deployed inside it. The computer can determine the user's emotional states by a single touch. With all these observations it determines the personality of the user.

B. Manual and Gage Input Cascading (Magic Pointing)

A webcam is used to quickly determine the glints and pupils of the user under variable and real lightning conditions and wrap the cursor to every new object the user looks at.

This technology will enable the computer to determine from users expression if he or she understood the information from screen before and automatically proceed to the next program.

C. Artificial Intelligent Speech Identification

The user talk to the computer through microphone and that talk get filtered and saved in Random Access Memory. The input words are scanned and matched against the internally stored words. Pattern matching is designed to look for the best fit because of variations in loudness, pitch, frequency difference, time gap, grammar, noise type, noise level and the position of the microphone are some important factors that may influence the features of speech recognition system. The identification causes some action to be taken.

Two basic ideas are included in the Artificial intelligence (AI),
• Study the thought of human beings.
• Represents the thought process of human beings through robots, computers etc.

Actually Artificial intelligence (AI) denotes the behavior of a computer or any machines but it is carried out by the humans is called as 'intelligent'. This AI makes machines more power full, useful, and smarter and also it is less expensive compared to natural intelligence.

Natural language processing (NLP) makes artificial intelligence systems to communicate English. The main goal of the Natural language processing (NLP) is to understand the users input and react according to these inputs. The input data or words are continuously scanned and finds matches against inside stored known data or words. And after identifying the key words, the corresponding actions are carried out by the machine. In this way the Blue Eyes technology enables the users to communicate with the machines with their own languages.

D. Simple User Interest Tracker (SUITOR):-

Blue eye enabled suitor become active when the user build an eye contact and regularly detect user's area of interest and starts searching it. E.g.: If you are reading title, pops up the story in the browser window. It implements the method for putting computational devices in touch with their users changing moods.

IV.EMOTION SENSORY WORLD

Human emotion is a visible proof of effective state, personality, emotional state and cognitive activity. There has been a lot of work done on blue eyes technology. This paper presents number of techniques proposed to identify emotional state of a person. According to Ekman, the neuro-part of the theory mention the partly innate and biological program, called a facial affect program, which specifies the relationships between various movements of the facial muscles and particular emotions (happiness, sadness, anger, surprise).

According to Ekman findings during:

Happiness : -The eyes are relaxed ;

Anger :-The forehead are pulled down and inward; no sclera is shown in the eyes;

Sadness: - The brows are drawn together with the inner corners raised and the outer corners lowered; the eyes are glazed;

Surprise: -The eyebrows are raised and curved.

V.METHODOLOGY

The methodology of Blue Eyes Technology is as follows:

Step 1: Get Snapshot

A video stream will start and when a person set focus on face and press "Enter" then it will take a snapshot. Immediately returns one single image frame, from the video input object. The frame of data returned is independent of the video input object Frames per Trigger property and has no impact on the value of the Frames Available or Frames Acquired property. The object must be a one-by-one video input object. Frame is returned as an H-by-W-by-B matrix where H- Image height, as specified in the ROI Position property W- Image width, as specified in the ROI Position property B- Number of bands associated with obj, as specified in the Number of Bands.

Step 2: Extract Eye Portion

1. Detection of Face Parts: (a) Input parameters: Detector: The detection objects built by build Detector. Thick (optional): Thickness of bounding box. (b) Output parameters: It creates bounding box for face, eye, left eye, right eye, mouth and nose, image with found face and these faces are stored as cell array build Detector build face parts detector object with threshold values for parts.

2. Shape Recognition and Edge Detection: (a) After getting the eye part we match it with the existing images by classifying it according to structure of eye and it texture we call it Shapes Classifier. (b) Separates the eye part only from the box boundaries of face. (c) Convert image from RGB to gray. (d) Threshold the image Convert the image to colorless, in order to prepare for boundary tracing using between boundaries. (e) Invert the Binary Image. (f) Find the boundaries Concentrate only on the outside boundaries. Option 'no holes' will accelerate the processing by preventing between boundaries from searching for inner contours. (g) Determine Shapes properties. (h) Classify Shapes according to properties Wrinkles, flat, swelled, etc.

Step 3: Comparison with stored Images in data base

The shape classifier will then match the captured image with the data entries in our database which in then converted to gray scale; the idea is to create a function which will return the distinctness in range [0, 1] between two postures. This means, we want to compare only a posture and on this basis the emotion of person for given two images (a grey region). For example, if we pass 4 to my function, the result will be 0 (because postures or emotions are not same and the result will be 1 if same). There are 25 images in database used for training. To create a database: open"create_ db.m", and load the image. It will detect eyes and store left eye and Right Eye in Database and save this entry in "Database.dat". database {x,y} x=entry /serial no, y=1 Left Eye y=2 Right Eye y=3 name of Mood For multiple entries to store in database we can change with coding: %load ('database.dat','-mat');%entries=size (database,

1); and change: database{1,1}=a; with database{entries+1,1}=a; then it will add a new entry each time and save all entries in database. database {1,2}=b; with database{entries+1,2}=b; database {1,3}='a'; with database{entries+1,3}='a'; It has been computed the correlation coefficient by flattening the matrix into a vector; the obtained results were around 0.987, indicating a close match. If essential we could have measured scaling and regular change to better align the images but it was not needed here.

Step 4: Play song according to matched mood

The generated script take a list of sound files and create a database of these sounds according to the emotion detection defined in database for each song, and then subsequently take one or more audio files according to matched emotion of previously created image database and plays it, List of sound files is analyzed and written to a single database file. Various sound file formats are supported, including wav, mp3 and aac.our database files are encoded with.wav extension. The sound file in database can then be saved as a wav file using the WAVWRITE function and later can be loaded using the WAVREAD function. The played sound returns the sample rate (Fs) in Hertz and the number of bits per sample (n bits) used to encode the data in the file.

VI.ACKNOWLEDGMENT

VII.CONCLUSION

The BLUE EYES TECHNOLOGY ensures a convenient way of simplifying the life by providing more delicate and user friendly facilities in computing devices. BLUE EYES technological approach assure a convenient technique, that simplifies the life by supporting more elegant and user friendly provision in computing devices. A blue eyes is a technology aiming to be a means of stress reliever driven by the advanced, technology of studying the facial expressions for judgment of intensity of stress handled. These new possibilities can cover areas such as industry, transportation, military command centre's or operation theatres. The day is very near, that this Blue Eyes technology will advance its way towards all house hold devices. In future, even this Blue Eyes will reach as your hand held mobile device.

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