A Vision Based Automated Face Recognition System For Controlling Media Player

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Abstract- *An advanced media player which plays and pauses the video by detecting the user's face positioned in front of the screen. System monitors whether the user is looking at the screen or not by using a web camera. If yes, it doesn't interrupt the video and allows it to play. In case, if the user is not looking at or say the system couldn't detect the user's face then it immediately stops the video. It is trying to add a feature for controlling other functions of media player. The goal of our project is to create an advanced media player based on looks and Hand Gesture. The user interface of media player was very efficient and user friendly. It is very accurate in terms of result. The media player adjusts the volume as soon as the user's hand is opened and closed. If the user face is not detected for 15 minutes, the system automatically goes to sleep mode. If the time extends further for a longer interval, then the system automatically shuts down.*

Keywords- Media Player, Webcam, Gesture, Face Detection

I. INTRODUCTION

Usually when you are watching a video and someone calls you, you have to look somewhere else or go away from pc for some time, so you miss some part of the video. Later you need to drag back the video from where you saw it. Well here is a solution to this problem. A Vision based media player that pauses itself when user is not looking at it. The player starts running again as soon as the user looks at it again. This is done using the camera or web camera on top of the computer. As long as the camera detects the users face looking at it, the media is played. The player pauses as soon as users face is not completely seen**.**

II. OBJECTIVE OF THE PROJECT

The goal of our project is to create an advanced media player based on looks and Hand Gesture.

We have set the following objectives for our media player to achieve the target.

1. The user interface of media player should be efficient and user friendly.
2. The media player pause the video as soon as the user's face is not detected without much latency.
3. The media player adjusts the volume as soon as the User's hand is opened and closed. If the user face is not detected for 15 minutes, the system automatically goes to sleep mode. If the time extends further for a longer interval, then the system.

III. EVALUATION

Existing Model

Mostly existing systems use eye recognition and voice detection. Due to which results aren't accurate.

Drawbacks

Face recognition and Hand Gesture system are not implemented properly together and not even individually.

Proposal System

In this method, we are using face detection and Hand Gesture for controlling media player like Video Adjustment, Audio Adjustment, Sleep and shutdown.

Features

- Face Detection
- Hand Gesture
- Video Adjustment
- Volume Adjustment
- Sleep Mode
- Shutdown

IV. IMPLEMENTATION

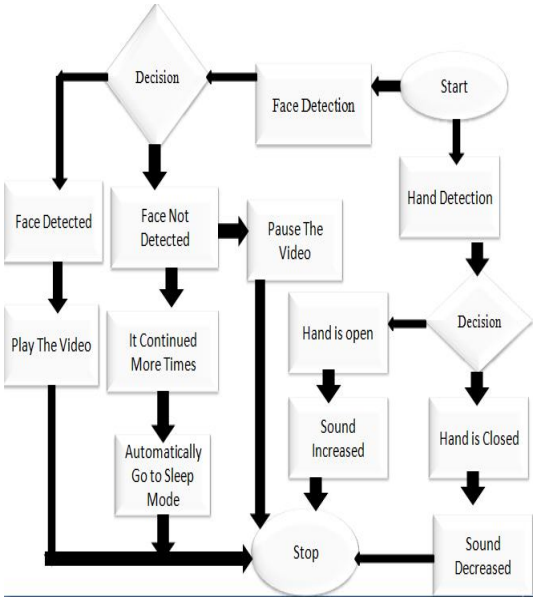

Fig 1.Block Diagram

Face Detection

In this method, we are using face detection using webcam it produce the result like the user's face is detected are not which details used to achieve video adjustment.

In the Viola-Jones object detection framework, the Haar-like features square measure thus organised in one thing referred to as a classifier cascade to create powerful learner or classifier. The key advantage of Haar-like features over most alternative features is its calculation speed. Haar-like options square measure digital image options utilized in visual perception. They owe them name to their intuitive similarity with haar wavelets and were utilized in 1st period face detector.

In the detection section of the viola-Jones object detection framework, a window of the target size is captive over the input image, and for every section of the image the haar likefeature is calculated. This distinction is then compared to a learned threshold that separates non-objects from objects.

Because such Haar- like feature is barely weak learner or classifier (its detection quality is slightly higher than random guessing) an oversized variety of Haar-like options square measure necessary to describe an object with amply accuracy, within the viola-Jones object detection framework, the Haar-like options square measure therefore are organised in one thing referred to as classifier.

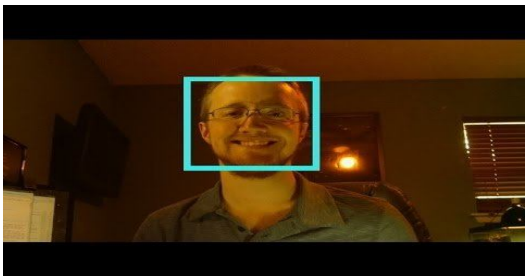

Fig 2.Face Detection

Video Adjustment

When webcam detect the user face the media player keep playing the video otherwise the media player stops the video

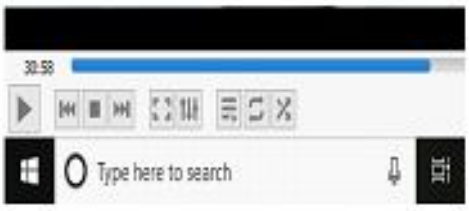

Fig 3.video Paused

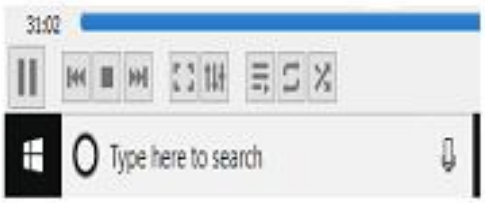

Fig 4.video Played

Volume Adjustment

When the user hand is opened in front of the webcam, the media player sound will be increased otherwise then the user hand is closed in front of webcam the media player sound will decreased.

Fig 5.Hand Closed

Fig 6.Hand Opened

V. OUTPUT

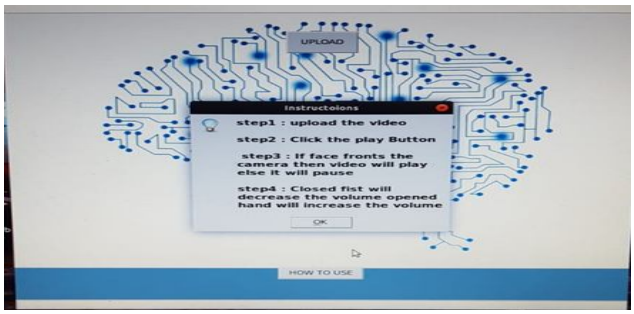

Fig 7.Access the media player

Fig 8.Video Adjustment

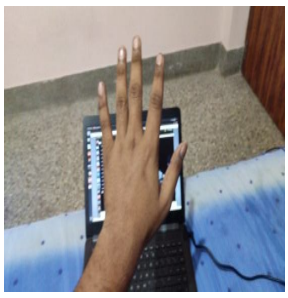

Fig 9.Volume Adjustment

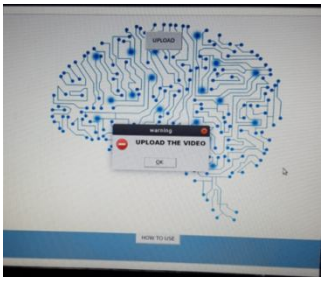

Fig 10.Warning Message

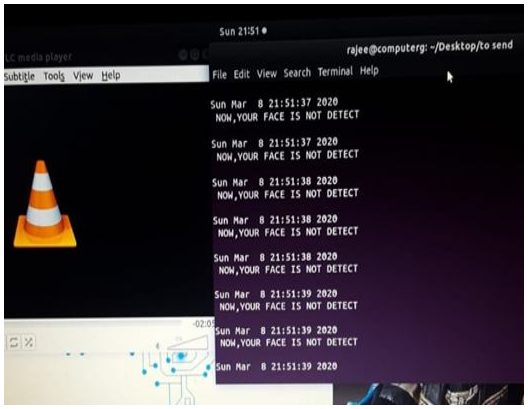

Fig 11.Hand Gesture Result's

VI. CONCLUSION

The main concern of this project is to assist the user to get best experience of using a media player. It Was realized by automating the media player in a very wide extent. It was done by implementing face detection and noise detection for dominant variety of options of the media player such as pausing and playing it again and again when the user is not monitoring the screen.

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