MINI PROJECT

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Synopsis

EMOTIC

Team Members

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EMOTIC

Objective-

Has anyone ever wondered looking at someone and listening and tried to analyze what kind of emotion they had or what kind of gesture they were trying to perform but you ended up being confused. Today we will be uncovering a couple of Deep Learning models which does exactly that. The models we will be developing today can identify some human emotions as well as a few gestures.

Some more objective of this project are:-

- The objective of this project is to implement a no-cost emotion expression.
- To provide comfort and convenience for every user, especially disabled or blind.
- Suitable for physically impaired people to operate the devices.
- Adds Safety Through Appliance and Lighting Control.
- Devices can be controlled more comfortably.

Working Methodology

- Classify emotional expressions based on facial landmarks and EEG signals.
- The system allows real-time monitoring of physically disabled patients.
- The system works effectively in uneven lighting and various skin tones

Software Specifications

- Technology Implemented : Computer Vision , IOT
- Language Used : Python
- Development Environment : Pycharm
- Web Browser : Chrome / Firefox

Hardware Requirements

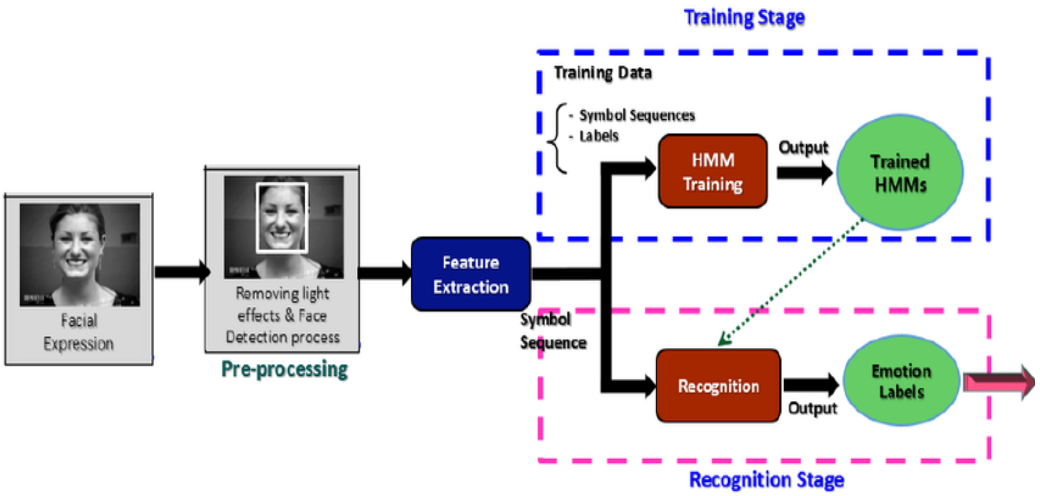
- Processor : intel i3
- Operating System : Windows 7/8/10
- RAM : 8 GB
- Hard disk : 64 GB

Existing System-

Facial expression recognition based on hand gesture include analysis of various techniques such as machine learning, computer vision, Artificial intelligence, Artificial Neural Network and so on. These all have some issues during the designing of any recognitionsystems.so we have to take care these issues. The following steps are taking care during human emotion recognition based on hand gesture. –

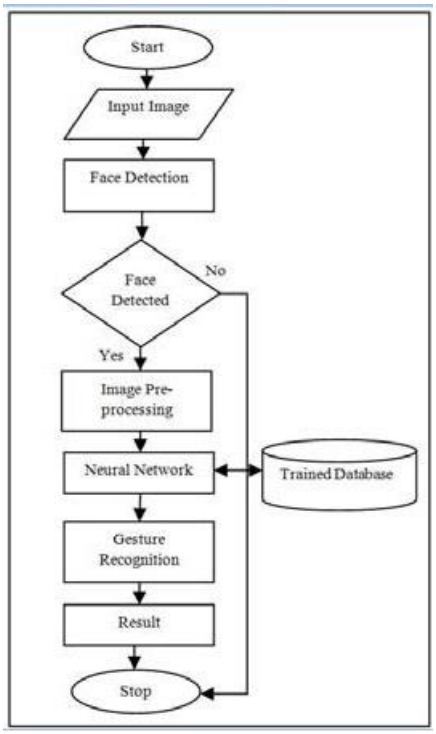
1. A database for facial emotions and hand gesture should be created.
2. Tracking the facial expression and hand gesture and its position on an image sequence.
3. Withdrawal the information of the face a hand gesture from features selection.
4. Recognition and classification of a human ‘emotions

System Architecture-



Typical architecture of facial expression

FLOW CHART



Advantages -

- Emotion-sensing technologies can help employees make better decisions
- improve their focus and performance in the workplace
- manage stress
- also help them adopt healthier and more productive working styles.

Future Scope-

Emotion detection recognition (EDR) is a method used for detection and recognition of human emotions with the incorporation of technological capabilities, such as facial recognition, speech and voice recognition . It offers tremendous scope to human computer interaction, robotics, health care, biometric security and behavioral modeling. Emotion recognition systems recognize emotions from facial expressions, text data, body movements, voice, brain or heart signals. Along with basic emotions, attitude, control over emotions and power of activation of emotion can also be examined for analyzing sentiments.

Online Git repository-

https://github.com/VarzikaT/Emotic.git

Conclusion-

When it comes to communication, facial emotion plays a crucial part, and so finding the appropriate expression is just as important as knowing what is being said. This project provides a method for distinguishing the category of face emotion, which is defined as follows: Achieving good face detection and emotion extraction from facial photos has been accomplished, and this technology is beneficial in a variety of applications, including robots vision, video surveillance, digital cameras, security, and human-computer interface. Face recognition and emotion recognition are the goals of this project, which will use computer vision to accomplish facial recognition and emotion identification while also improving advanced feature extraction and classification in face expression recognition. This research investigates the topic of face emotion analysis, namely the recognition and detection of emotions. A convolution neural network is described for the purpose of classifying face pictures into the seven regular emotions of happiness, fear, sorrow, anger, surprise, disgust, and neutrality. The seven regular emotions are: happiness, fear, sadness, anger, surprise, disgust, and neutral.

References:

- www.google.com
- https://data-flair.training
- https://opencv.org/