

STUDENT MOOD DETECTION AND ATTENDENCE MANAGEMENT SYSTEM USING DEEP LEARNING AND CNN

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Abstract: *The aim of this system is to present an automated system for human face recognition for an organization or institute to mark the attendance of their students. Emotion reveals important information regarding human communications. It is commonly used for facial expressions to express emotions during a conversation. Now a days; analysis of human body movements for emotion recognition is needed for social communication. Non-verbal communication includes methods like body movements, facial expression and eye movements are used in different applications.*

Keywords—*Facial expression, Face detection, Deep neural network, Deep learning, Emotional recognition.*

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I. INTRODUCTION

Face discovery is a PC innovation being utilized in an assortment of utilizations that distinguishes human faces in computerized pictures. Face acknowledgment similarly insinuates the psychological method by which individuals find and deal with appearances in a visual scene. Uniqueness or singularity of an individual is his face. In this task face of an individual is utilized with the end goal of participation making naturally. Participation of the understudy is significant for each school, colleges and school. Regular procedure for gauging participation is by calling the name or move number of the understudy and the participation is recorded. Time utilization for this intention is a significant purpose of concern. Expect that the span for one subject is around an hour or 1 hour and to record participation takes 5 to 10 minutes. For each coach this is utilization of time. To avoid these misfortunes, a programmed procedure is utilized in this task which depends on picture handling. In this undertaking face identification and face acknowledgment is utilized. Face identification is utilized to find the situation of face area and face acknowledgment is utilized for denoting the under studies participation. The database of the significant number of understudies in the class is taken care of and when the substance of the individual understudy matches with one of the faces set aside in the database then the investment is recorded.

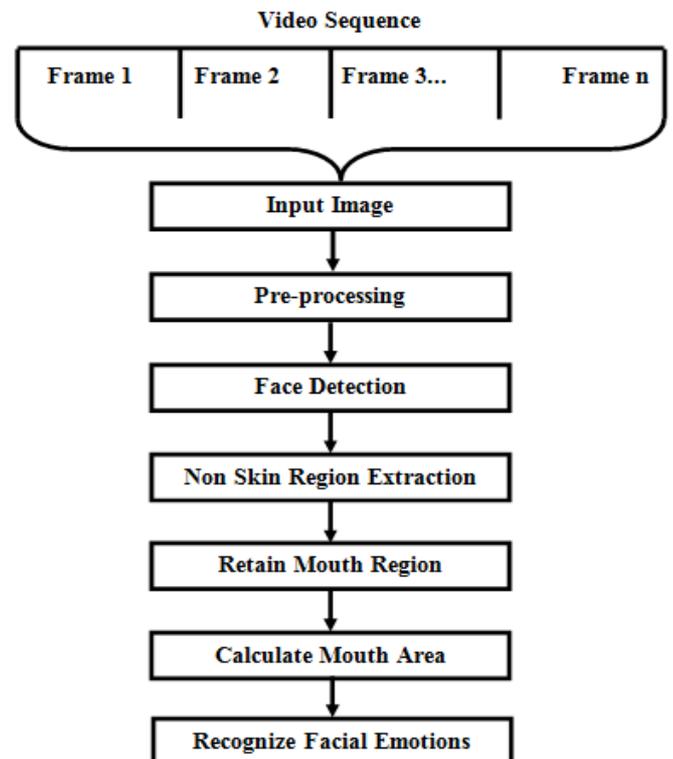
II EXISTING SYSTEM

Conventional method for checking participation includes an average circumstance of understudies sitting in a study hall and the instructor getting out the names of the understudies independently to stamp their participation. The participation is generally checked utilizing hard assets - pen and paper. The gigantic participation records that kept up are at that point utilized for later references.

A. Limitations of Existing System

- It is time Consuming.
- Error-prone.
- Its leads to wastage of Resources.
- They are time consuming and not more efficient.
- that it would not be suitable to Perform general abstractions

B. Flowchart



C. Algorithm

1. Read the information video outline picture
2. Convert the picture into grayscale picture.
3. Enhance the information picture with middle, wiener and Gaussian channels.
4. Find the best channel dependent on PSNR, RMSE values.
5. Apply viola-jones calculations to distinguish the face district.
6. Use jumping box strategy and yield the face locale.
7. Use limits an incentive to remove on skin areas.
8. Apply morphological activities to remove constant boundaries of non-skin district.
9. Mask the limit from the first picture.
10. Extract the mouth district.
11. Area is determined from the removed-mouth district.
13. Recognizes facial feelings dependent on the estimation of the region.
14. Recognize facial feelings dependent on the estimation of territory

III PROPOSED SYSTEM

A. Introduction

The essential objective of the system is to give a motorized interest structure that is practical, strong and gets rid of agitating impact and time adversity in traditional support structures. A further objective is to show a system that can unequivocally survey under study's quintessence length depending upon their recorded interest rate. We have starting at now used are readied face net designing. In any case, for a prevalent introduction if we assemble more data of faces and have resources for help plan on the face net there would be a colossal improvement in the exactness.

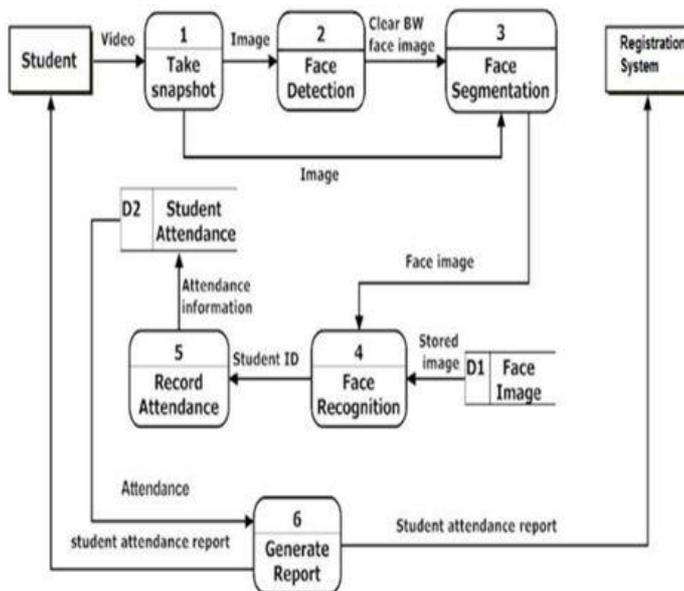


Fig.3.1 System Architecture

Working

We are setting up to arrangement a structure including two modules. The primary module (face-identifier) is a convenient section, which is on a very basic level a camera application that gets understudy faces and stores them in a record using PC vision face acknowledgment figurines and face-extraction strategies. The resulting module is a work-zone application that faces affirmation of the got pictures (faces) in the record, indicates the understudies register and a short time later stores the results in a database for future assessment.

IV. LITERATURE SURVEY

1.P.Salovey and J. D. Mayer, "Emotional Intelligence, "Imagination, Cognition Personality vol. 9, no. 3, pp. 185-211, 1990.

The freedom of social knowledge from other sort of understudy's attendances is taken physically by utilizing participation heat given by the employees in class, which is a tedious occasion. In addition, it is hard to check individually understudy in a huge study hall condition with disseminated branches whether the confirmed understudies are really reacting or not.

2. C. E. Izard, "Innate and extensive outward appearances: confirmation from formative and socially different research." Mental Release, vol.no. 2, pp. 288-299, 1994.

Checking the exhibition of understudies and keeping up the participation is a dull procedure for foundation. Each foundation has embraced their own technique for gauging participation for example calling the names or by passing the sheets.

3. F. Agrafioti, D. Hatzinakos and A. K. Anderson,"ECG Example Examination for Feeling Detection,"IEEE Exchanges on Full of feeling Processing, vol.3, no.. 1, pp. 102-115, 2012.

Highlights for feeling acknowledgment framework depending on ECG signals are generally inferred dependent on standard Pulse Inconstancy (HRV) – variety of time stretch between pulses – examination, which frequently requires at any rate 5 minutes length or a few hours of ECG signals. These highlights are in this way generally reasonable for influence acknowledgment where enthusiastic states don't change a lot. Be that as it may, it isn't reasonable for feeling following applications where feelings change quickly inside a brief timeframes.

4. Matthew D Zeiler, Marc'Aurelio Ranzato, Rajat Monga, Min Mao, Kun Yang, Quoc Viet Le, Patrick Nguyen, Alan Senior, Vincent Vanhoucke, Jeffrey Dignitary, et al. On rectified linear units for speech processing. In Acoustics, Discourse and Sign Handling (ICASSP), 2013 IEEE Universal Gathering on, pages 3517–3521. IEEE, 2013.

Participation recording in instructive foundations is a compelling undertaking. In the greater part of the instructive foundation give database organization yet the framework depends on manual information dealing with strategies. In this paper, we forward put a framework that takes the participation in the study hall when the talk is going on.

5. M. Zhao, F. Adib and D. Katabi, "Emotion acknowledgment utilizing wirelesssignals," in Procedures of the 22nd Yearly Global Meeting on Versatile Figuring and Systems administration, New York City, 2016.

This paper exhibits another innovation that can surmise an individual's feelings from RF signals reflected off his body. EQ-Radio transmits a RF signal and dissects its appearance off an individual's body to perceive his enthusiastic state (upbeat, tragic, and so on.). The key empowering influence fundamental EQ-Radio is another calculation for removing the individual pulses from the remote sign at precision practically identical to on-body ECG screens. The subsequent beats are then used to process feeling subordinate highlights which feed an AI feeling classifier.

V APPLICATION

- School
- College
- Seminar Corridor

VI FUTURE SCOPE

At present, the structure has shown up at the accuracy level up to 100% for fragmented and thick pictures. It can furthermore be improved to get higher precision levels. Further at any rate two cameras can be used and each image can be taken care of freely. The results of these can be changed over to show signs of improvement results and precision in denser homerooms.

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