ATTENDENCE AND MASK ANALYSIS SYSTEM

SUBMITTED BY-

- PRABHAT KUMAR

  URN:1805539
- AKHILESH KUMAR

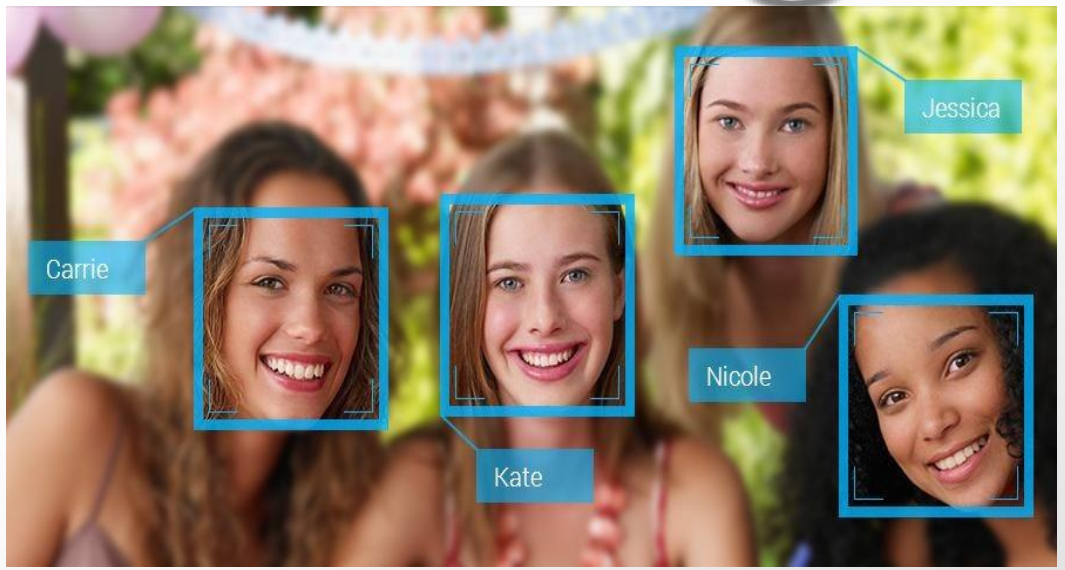
  URN:1805485
- SANGHARSH KUMAR

  URN: 1905840

SUBMITTED TO-

Dr. Hardeep Singh Kang

INTRODUCTION



- In Today's growing (AI)world manual system of marking attendance needs more time and efforts to mark attendance which is also inefficient.
- In this project we focused on the automated system of marking attendance with new and advance technology which is beneficial for students as well as teachers also who mark attendance .
- It also gives the record of students in excel sheet at the end of month that how much attendance students have and how much class a student attend and one good things is that it also inform the student parents about this record.

PYTHON

1. Python is very simple to use High level programming language.
2. Writing python is very easy because it is more like plain English.
3. Python Codes are much shorter as Compared to other language.
4. Python have inbuilt OpenCV support and can run on any type of system.

OPENCV

- **OpenCV** (Open Source Computer Vision) is a popular computer vision library started by Intel in 1999. ... **OpenCV** 2.4 now comes with the very new Face Recognizer class for **face recognition**, so you can start experimenting with **face recognition** right away.

TENSORFLOW 2.0

- TensorFlow is easier to use with a basic understanding of machine learning principles and core concepts.

- **TensorFlow** is an open-source end-to-end platform for creating Machine Learning applications. It is a symbolic math library that uses dataflow and differentiable programming to perform various tasks focused on training and inference of deep neural networks.

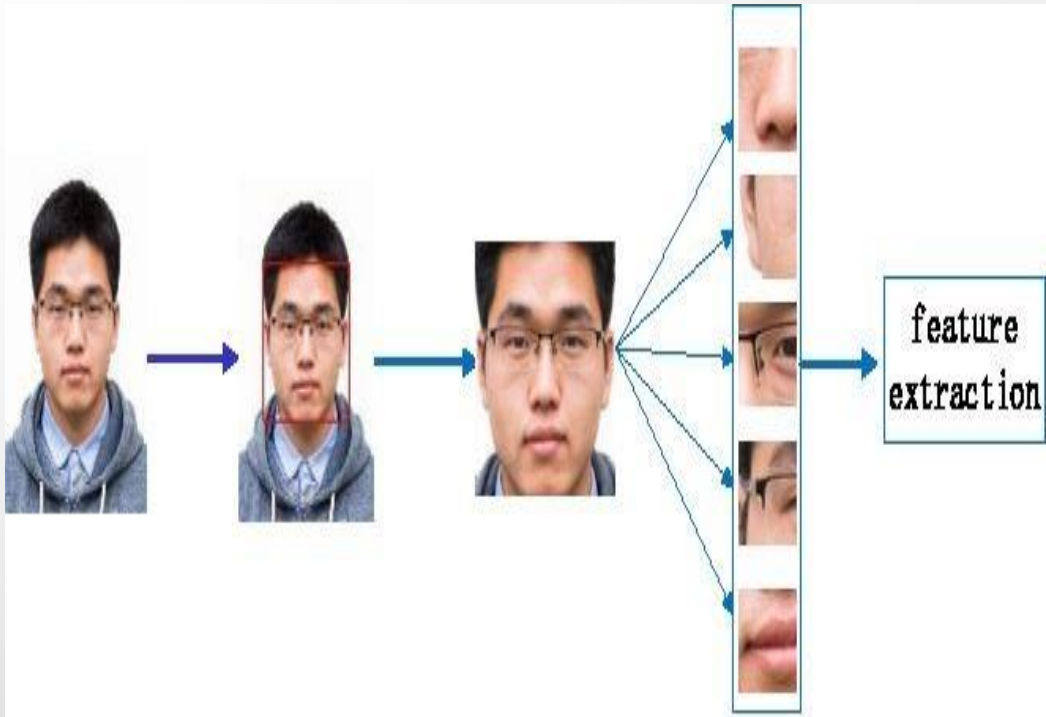


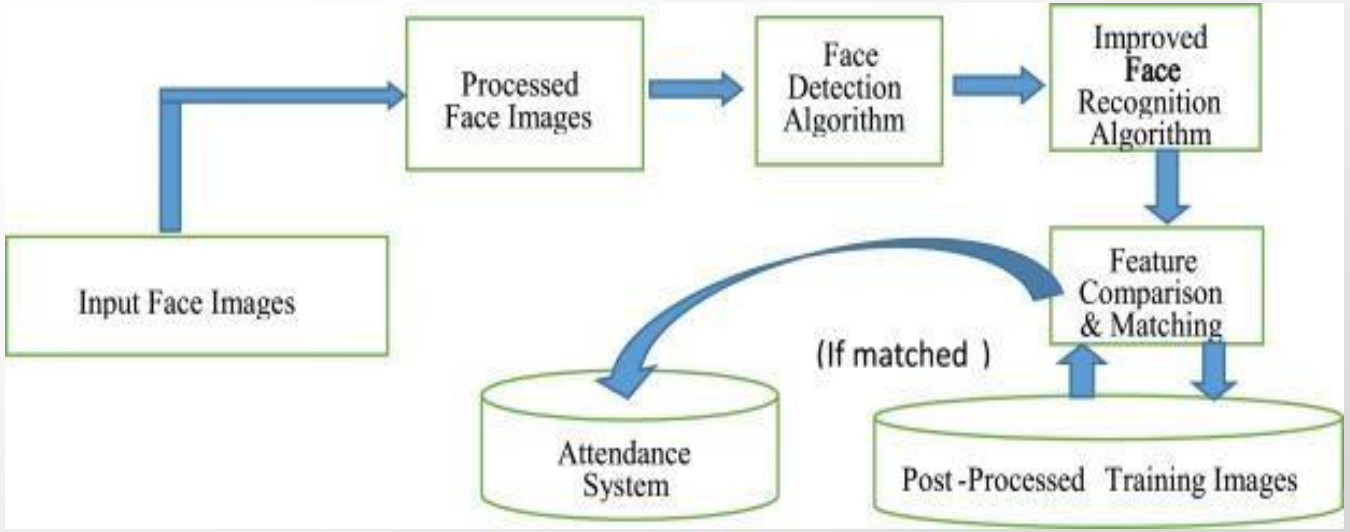
Fig. 5 Threshold clipping.

OBJECTIVES

- To mark students attendance by taking picture of multiple faces.
- To generate report of students to check whether students using facemask or not.
- It also generate the excel sheet at the end of month which helps in analysing the class activities of the students.
- To provide detailed information about presence of student in the to both teacher and parents.

How it Work

- First registration process is done for whole students in the college so that the system have all the full filled data.
- Registration process contain the student face pics with mask or without mask and their detail. So that we have each students data sets for identifying students.
- Initially for recognition human faces we have already trained our model on datasets.
- By applying brute-force method system pick on face from image and just matched to the data stored in our system.
- If matched found – then for matching face without mask we have a about 90-95 percent of accuracy and for matching face with mask we have about 50-60 percent accuracy.



RESULT & EVALUATIONS

- ➔ System detect single or multiple face a time and mark attendance accordingly.
- ➔ Face detection capability is depends upon the resolution of camera used for this system.
- ➔ Store the data for persistency and future use.

- ➔ Analysis and report generation

CONCLUSION

- Online Attendance System using ML algorithms is designed for the motive of reducing the mistakes that may occur during traditional attendance system.
- Face recognition is one of the easiest and comfortable method to incorporate in the attendance system.
- Several influential factors are there on which accuracy of separate algorithms vary on. This is a big challenge for class attendance system as it is employed in an uncontrolled environment

FUTURE SCOPE

A mail which contains the information about absent as well as attendance percentage is mailed to the respective parents instead of messages using face recognition based attendance management system. Process of taking attendance is done module by module, it is possible to update attendance in one click or touch instead. Parents can also get the information about the internal assessment marks through messages if their children if capability of this system goes extented.

THANK YOU