Abstract

<u>Face Recognition Attendance System</u>

Introduction:

In the era of modern technologies emerging at rapid pace there is no reason why a crucial event in educational sector such as attendance should be done in the old boring traditional way. We are living in a world where everything is automated and linked online. The internet of things, image processing, and machine learning are evolving day by day. Many systems have been completely changed due to this evolve to achieve more accurate results. The attendance system is a typical example of this transition, starting from the traditional signature on a paper sheet to face recognition.

This Project proposes a method of developing a comprehensive embedded class attendance system using facial recognition with showing whether the face of the person is the student for that specified class or not.

Face detection and face recognition are very important technologies these days, furthermore we noticed that they got have a variety of uses such as cellphones, army uses, and some high risk information offices. We decided to make a device that detects and recognize the face as a student attendance system and can be a substitute for the regular paper attendance system and finger print attendance system.

Attendance monitoring system will save a lot of time and energy for both parties students as well as the class teachers. Attendance will be monitored by the face recognition algorithm by recognizing only the face of the students from the rest of the objects and then marking them
as present.The system will be pre feed with the images of all the students and with the help of this pre feed data the algorithm will detect them who are present and match the features with the already saved images of them present in the database.

The system is based on the machine learning algorithm which is to be implemented on python language and using computer/laptop camera for the input image of the

students or a normal outer camera can also be used which has to be connected to the system which is programmed to handle the face recognition by implementing the Local Binary Patterns algorithm LBPs.

Business/Social Impact

As they say, saving time is equal to saving money. And saving time at the workplace can boost productivity. Face recognition attendance systems have proven to help manage time and transform the workplace atmosphere. Face Recognition App means 'no paperwork', which ultimately saves time and money, providing accurate data instantly.

Future Scope

The future of face recognition technology is bright. Forecasters opine that this technology is expected to grow at a formidable rate and will generate huge revenues in the coming years. Security and surveillance are the major segments which will be deeply influenced. Other areas that are now welcoming it with open arms are private industries, public buildings, and schools. It is estimated that it will also be adopted by retailers and banking systems in coming years to keep fraud in debit/credit card purchases and payment especially the ones that are online.

Team Details:-

Ishika Agarwal, 19ESKIT032

Kritika Surana, 19ESKIT046

Kunal Bharagatiya, 19ESKIT048

Lavanya Jain, 19ESKIT051