PROJECT INFORMATION FORM

TEAM NUMBER	:	08

PROJECT NAME   :

AUTOMATED FACE RECOGNITION ATTENDANCE SYSTEM USING DEEP LEARNING

TEAM DETAILS   :

SNO	ROLL NUMBER	NAME
1	20EG105113	G. ROHITH REDDY
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4	20EG105133	M. KARTHIKEEYA
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PROBLEM STATEMENT:

In the evolving landscape of education and workforce management, the demand for precise attendance tracking systems is critical. This project introduces an innovative solution—an Automated Face Recognition Attendance System powered by deep learning and the FaceNet model. Traditional attendance methods often fall short due to inaccuracies, manual efforts, and time-consuming processes. To overcome these challenges, our project leverages advanced deep learning techniques to establish a robust, real-time, and automated attendance tracking system. At the core of our solution lies the FaceNet model, a neural network engineered for encoding and comparing facial features. This technology enables precise identification through facial recognition, allowing attendance to be effortlessly marked with a simple glance. The system excels in accurately recognizing individuals, even under varying lighting conditions and angles. Emphasizing user experience, our project incorporates an intuitive and user-friendly interface through a web-based application is developed. This ensures seamless integration with educational institutions and corporate environments. Users can easily initiate attendance marking, monitor real-time data, and access historical attendance records. The advantages of our system extend to diverse domains such as event management, security, and access control, where accurate attendance tracking is paramount. As we look ahead, the Automated Face Recognition Attendance System signifies a technological leap, eliminating the complexities associated with traditional attendance management methods. With its precision, efficiency, and adaptability, this system is poised to revolutionize attendance tracking across various industries.

SOURCE OF PROJECT :

[1] HAO YANG1 AND XIAOFENG HAN "Face Recognition Attendance System Based on Real-Time Video Processing" – IEEE 2020

[2] YANLI REN , ZHUHUAN SONG , SHIFENG SUN , JOSEPH K. LIU , AND GUORUI FENG "Outsourcing LDA-Based Face Recognition to an Untrusted Cloud" – IEEE 2023

[3] BUSRA KOCACINAR 1 , BILAL TAS1 , FATMA PATLAR AKBULUT 1 , CAGATAY CATAL 2 , AND DEEPTI MISHRA 3 "A Real-Time CNN-Based Lightweight Mobile Masked Face Recognition System" – IEEE 2022

FINAL OUTCOME   :

The efficient and accurate method of attendance in the office environment can replace the old manual methods. This method is secure enough, reliable, and available for use. No need for specialized hardware to install the system in the office. It can be constructed using a camera and computer. In this system, we have implemented an attendance system which record student's attendance. It saves time and effort, especially if it is a lecture with a huge number of students. An automated Attendance system has been envisioned for the purpose of reducing the drawbacks of the traditional attendance system. This attendance system demonstrates the use of image-processing techniques in the classroom. This system can not only merely help in the attendance system, but also

improve the goodwill of an institution.

PARAMETERS TO BE CONSIDERED FOR PROJECT EVALUATION:

- The project is going to get the frontend UI by which the students are going to interact with the system.
- In this project the main parameter going to be considered is the image processing of the students which is very essential for the facial validation of the student.
- If the student is not registered properly then the person can be registered with the system and upload the image of his. After uploading the image will be undergoing the image training and testing by taking the multiple images of the person till the system get the proper image of a person.
- Once it get the image of a person the student can directly use the system.
- The faculty can directly download the attendance of a system once used.
- These are the parameters considered for the project evaluation.

DEVELOPMENT ENVIRONMENT:

- Python modules and libraries
- Pycharm IDE, Flask
- Face_recognition and dlib Library of deep learning

SIGNATURE OF TEAM MEMBERS: **SIGNATURE OF SUPERVISOR:**

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