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# AN INTELLIGENT SYSTEM FOR IDENTIFICATION CARD DETECTION AND AUTHENTICATION

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## ABSTRACT

Identification Cards help us to make sure that every person in the organization is identified. It is a quick and easy way to determine whether or not a person belongs to particular organization. The main goal of our project is to identify and recognize the person and their own ID Card. To facilitate object detection in a college environment, the proposed work identifies the presence of a person wearing their own ID card or not. It also helps the organization to identify if the person belongs to their own organization or not. With the help of this project, we can also evaluate the attendance of the person which would be highly useful for educational institutions.

**Keywords:** Identification Card, Organization, Recognition, Detection, Attendance.

## I. INTRODUCTION

An ID card is most commonly used to verify that the person's details. A person's name, photograph, date of birth, and other details are printed on an identity card. Using open cv, we can detect objects such as I'd cards. After that, the person who is not wearing the I.D. card will be detected. If the person is detected wearing their own ID card thenattendance is marked. For this, we have to train the student face and then we have to train the id card when the two images are matched then the result will be notified.

## I. METHODOLOGY

The proposed methodology is, we perform detection of ID card using Convolution Neural Network (CNN) of deep learning and Open cv approaches in the purposed manner. We are using algorithms like Viola Jones Algorithm and LBPH(Local Binary Pattern Histogram) algorithm, YOLO Algorithm for object detection. As image analysis-based waysfor identifying the ID card under a webcam and storing database of the people who are not wearing it. We are also trackingthe attendance i.e., name and roll number of the person directly who is identified wearing their own identity card.

## II. MODELING AND ANALYSIS

Images of students are used to train the machine whether the student is wearing the ID card or not and if the student is wearing their own ID card. The dataset was created by us which includes the images of students and has attributes namely,

1. Images of Students wearing ID cards
2. Images of Students not wearing ID cards
3. Images of ID cards

It can be used in Schools, Colleges, Offices etc. wherever ID Cards are issued, it. can also be used in Exam Centres. This model can be directly placed at the entrance of the organization so the people only with their own ID card can enter.

**ARCHITECTURE DESCRIPTION:**

**Enrolling Details :** Details of person such as name and roll number are entered.

**Capturing Images:** The camera opens to capture face and ID Card of the person.

**Training and Comparison:** The images of person are trained and are compared with the image in the IDcard to detect if the person is wearing his own ID card.

**Attendance:** The attendance is captured if the person is found if he is found wearing his own ID card.

**Violation :** A violation is occurred if the person is found without any ID card and the images of the person are captured and stored in database.

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**Mail Sent :** A mail is sent to the admin containing image of the person who is found without the ID card to approve his/her authentication.

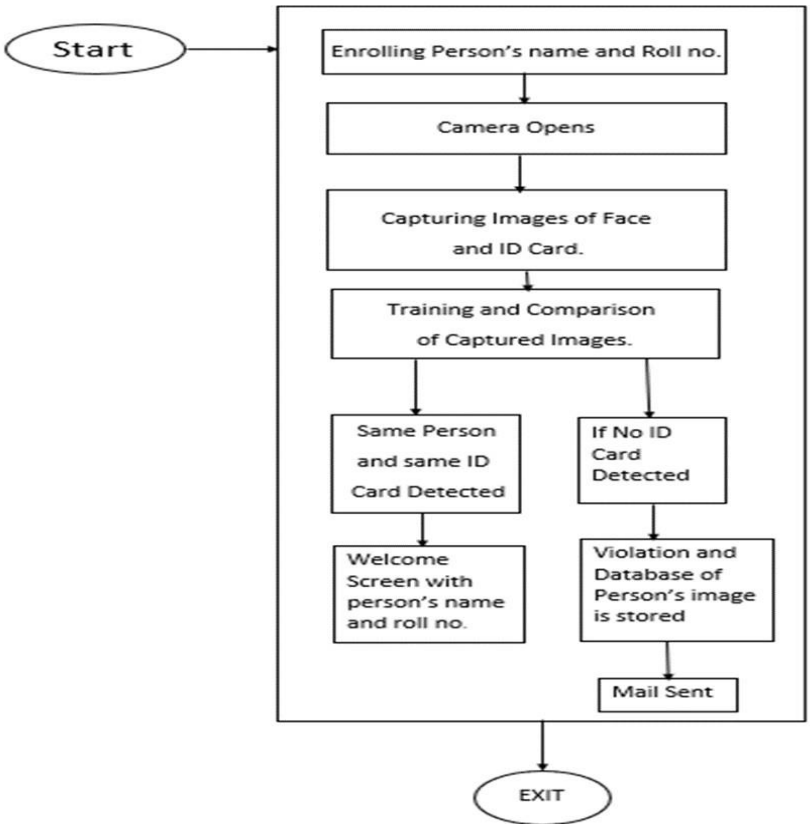


**Figure 1:** Architecture

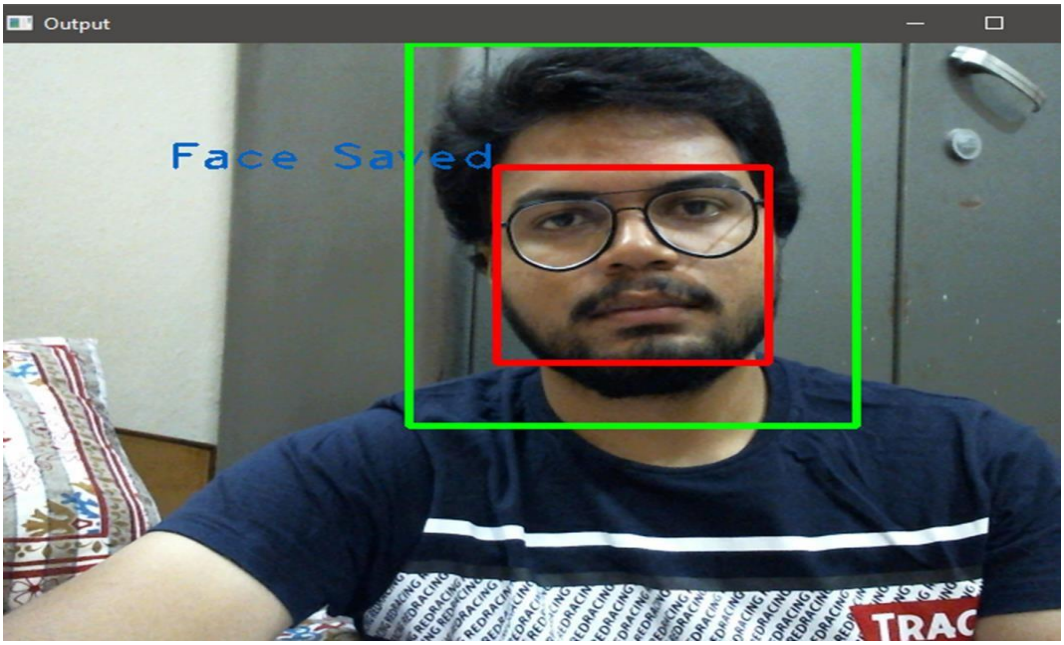


**Figure 2:** Saving the face

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**Figure 3:** Saving the ID Card

## III. RESULTS AND DISCUSSION

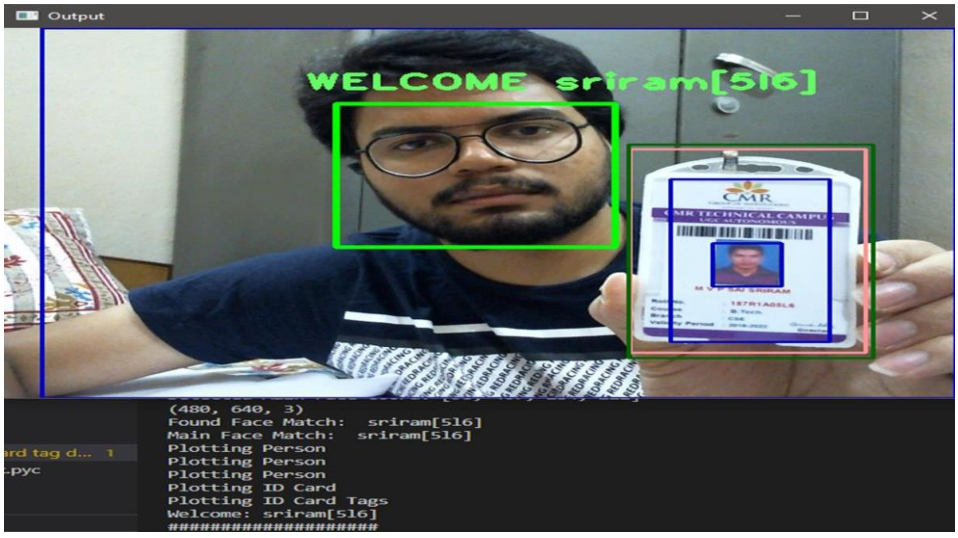
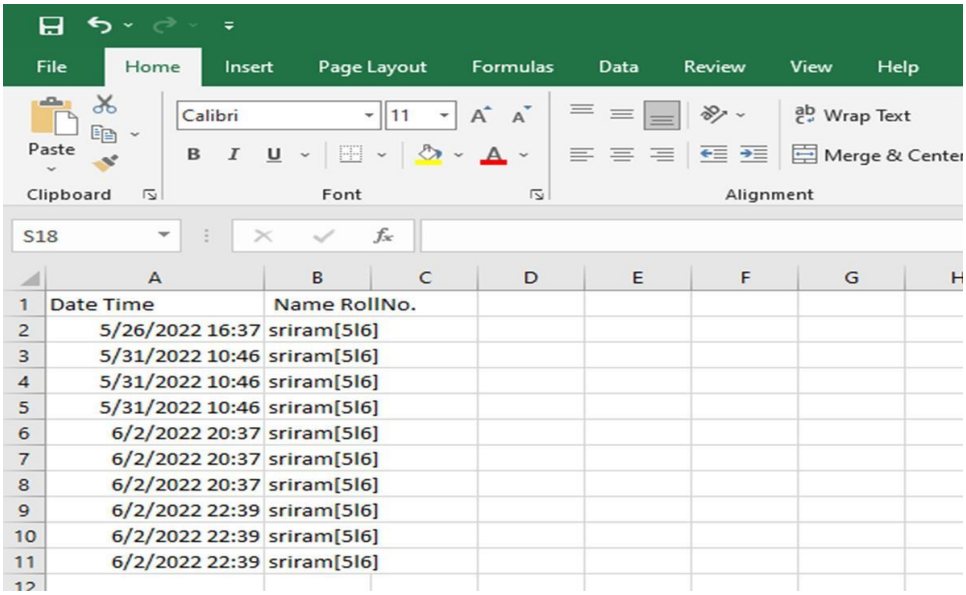



**Figure 4:** Detection of the person with his own ID Card



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Date Time | Name RollNo. | | | | | |
| 2 | 5/26/2022 16:37 | sriram[5l6] | | | | | |
| 3 | 5/31/2022 10:46 | sriram[5l6] | | | | | |
| 4 | 5/31/2022 10:46 | sriram[5l6] | | | | | |
| 5 | 5/31/2022 10:46 | sriram[5l6] | | | | | |
| 6 | 6/2/2022 20:37 | sriram[5l6] | | | | | |
| 7 | 6/2/2022 20:37 | sriram[5l6] | | | | | |
| 8 | 6/2/2022 20:37 | sriram[5l6] | | | | | |
| 9 | 6/2/2022 22:39 | sriram[5l6] | | | | | |
| 10 | 6/2/2022 22:39 | sriram[5l6] | | | | | |
| 11 | 6/2/2022 22:39 | sriram[5l6] | | | | | |

**Figure 5:** Marking Attendance of person wearing the ID Card

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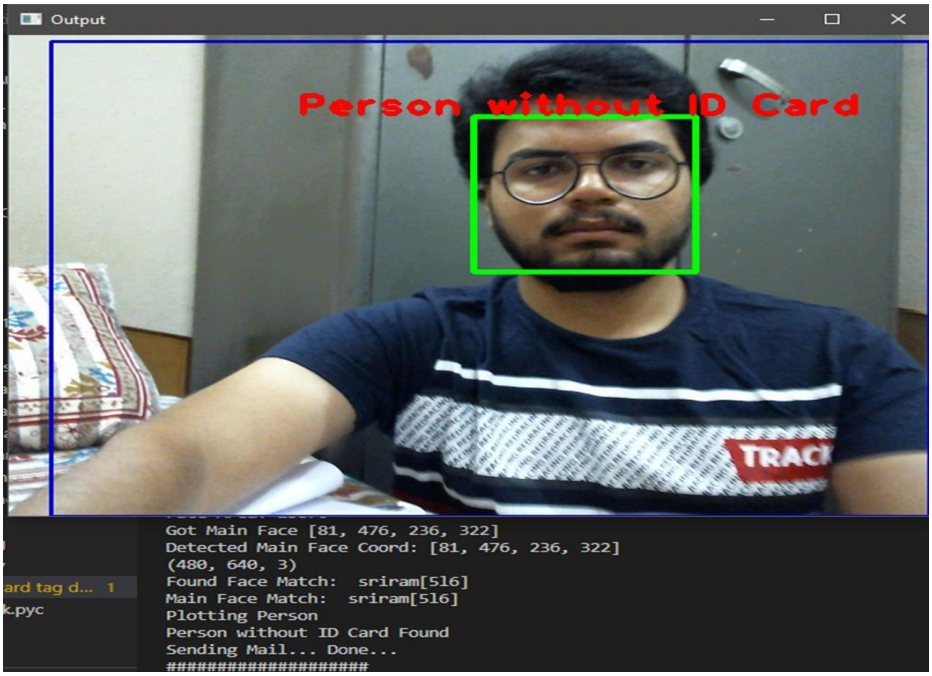


**Figure 6:** Violation/No ID Card detected

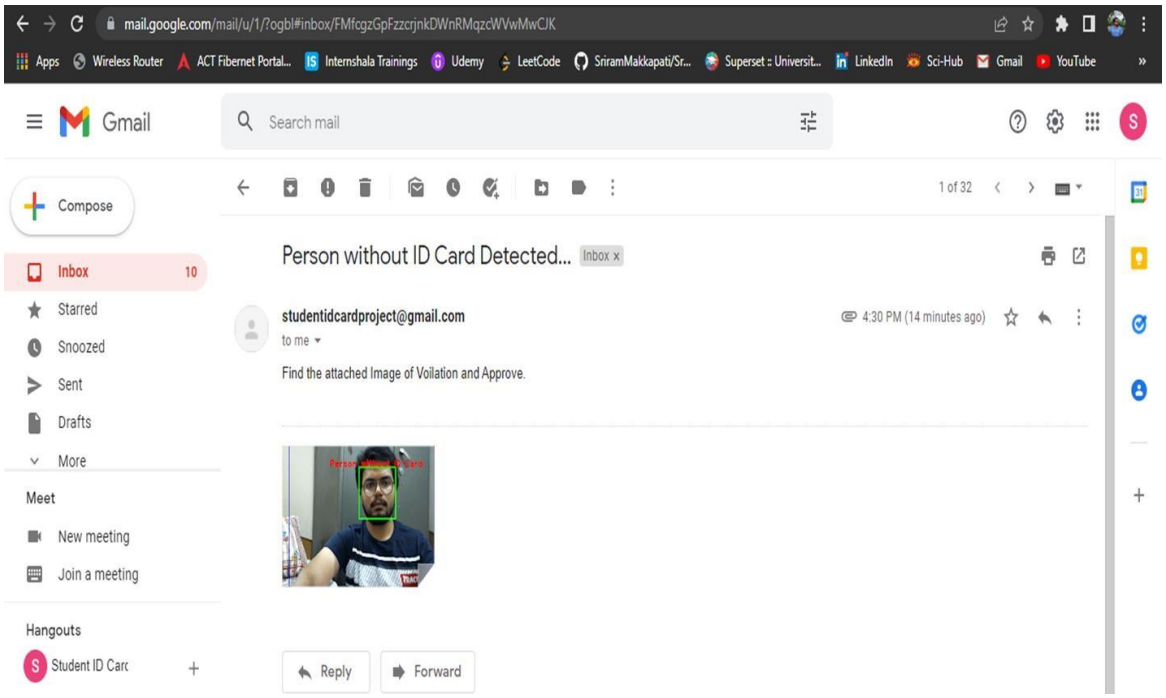


**Figure 7:** Sending mail to admin to approve the person's identity

## IV. CONCLUSION

The Identification cards have become an important component of the corporate sector, allowing organizationsto simplify students and faculty identification while also improving their integrity and security. The proposed work identifies the presence of a person wearing an ID card using tensor flow object detection API, detects and recognizes. For this, we have to train the student face and then we have to train the id card when the two images are matched then the result will be notified

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