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IOT BASED DOOR ACCESS CONTROL SYSTEM USING FACE RECOGNITION

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ABSTRACT

In this paper, a construction of a door lock system is done through means face recognition which associated with the ESP32 cam for accurate detection of face of the person as compared to existing system. The backbone of system is ESP32 which runs on Battery which handle the locked and unlocked system of the door. This door lock system which can operate by using face recognition and smart phone. Authorized person can enter using face detection system and unauthorized person can enter using ESP32 CAM. For unauthorized person ESP32 CAM capture the image and send notification to the owner. Thus all the processing and control is done cloud respectively.

Keywords: Image Capturing And Notification, Safety And Security, Smart Door System.

I. INTRODUCTION

Now a days home, off ices, shops, banks require a great security for security reasons. Modern systems have been introduced to provide security in this area. The Face Detection System FDRS is a technology that recognizes body features using mathematical features specific to human appearance. This technology is convenient and safe to use. In standard FDRS application, one is called certification and the and the is called valid. Understanding the face mains telling structure of whose, or perhaps it is the image of the face. Face recognition means that the system will tell you the truth and lies about the assumption given to the facial image and the detection assumption. So far, many sources have come out of non-renewable sources, such as fossils and charcoal, and these sources are quick to conclude that there is a new method Photovoltaic (PV) photovoltaic converts into electricity.

II. METHODOLOGY

This is door lock system simply use by security purpose. In this system there are two security step first face recognition and second is IOT base door lock system by using blynk application. In the second step of security any one press the bell then ESP32 send the notification to the owner smart phone by using blynk application. This is the simple security system of the project.

III. MODELING AND ANALYSIS

This model is used for security perspectives and this is an integrated digital circuit, which consist hardware and software. ESP32cam is circuit containing camera to capture the PIC and share the information to the bread board with contains all the hardware for processing. Solenoid lock is a lock system which open and close when the current flow in it or stops. It opens and closes with help of magnetic circuit corresponding to the instruction provided by the bread board.

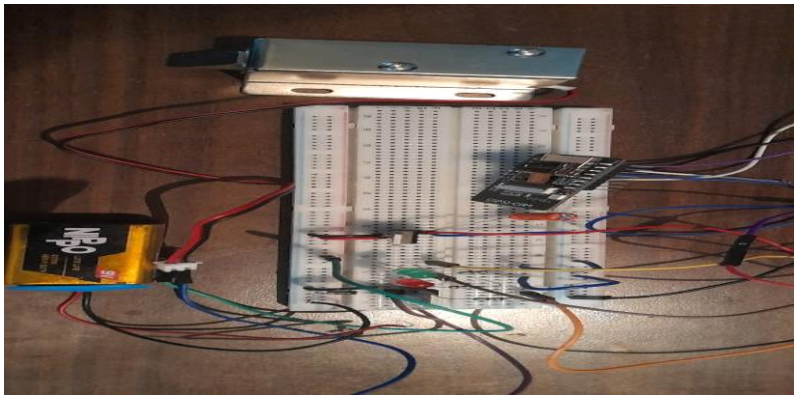

Fig. module of the project

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This is the smart phone setting of camera and blynk application.

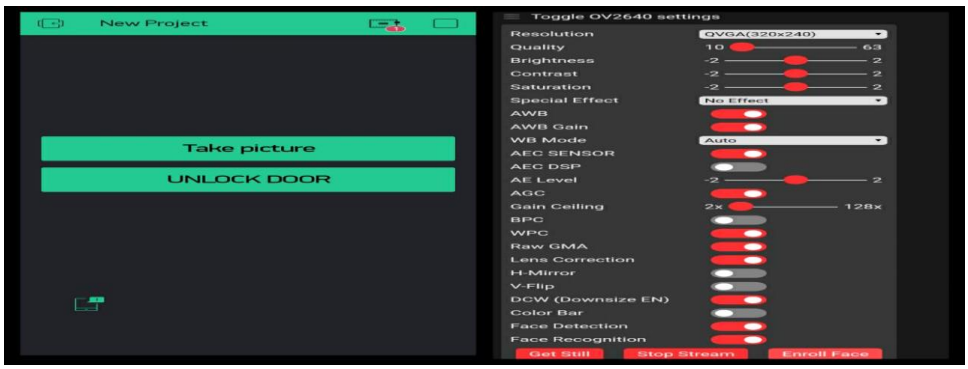

Fig. Setting

IV. RESULTS AND DISCUSSION

A door lock system that can be used for face and face design. Authorized persons can log in using the face detection system. People who do not have access to it can log in using ESP32CAM. For unauthorized persons, the ESP32 CAM captures the image and sends the notification to the owner. All data generated is stored in cloud storage. Therefore, all control is in the cloud, photos. Works with a digital face lock system.

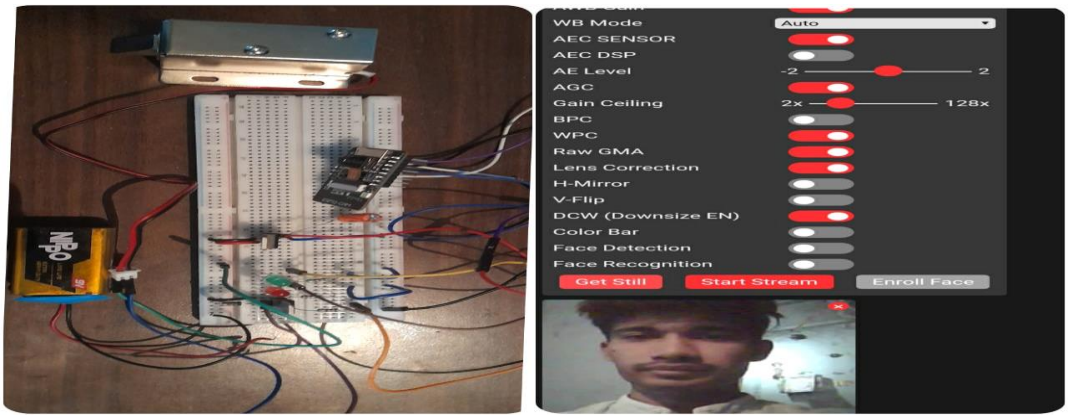

Fig. Working of digital door lock using face

V. CONCLUSION

In this way, you can clearly see that it is reliable and fun. It can only be accessed from a remote location. Easy to use in locker rooms, bank keys, car doors, bank vaults, as well as home offices. It is a universal view of what is dedicated to the Internet. We have successfully implemented a robust face-to-face export system that can be used as a cost-effective project to replace fingerprint / fingerprint knowledge.

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