

IOT SMART LOCK

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ABSTRACT-In this paper, we use smart door locking system. We use Raspberry pi, pi camera to capture the image, GSM module. We use this to develop the smart door automation using the hardware like Raspberry pi and the GSM module. Raspberry Pi detects the motion and camera acts like a sensor. It captures the unauthorized persons picture. We use python programming for the operation of the raspberry pi. We use a software that displays how many times the door is locked and unlocked, and at what time the door is locked and unlocked.

Index Terms- Internet of Things [IOT], Raspberry pi3, Pi Camera, Mobile device, Home Security.

I . INTRODUCTION

Here we use smartlock system, when a house owner is outside, so that when unknown person comes near to the entrance of the door so he tries to unlock the door, then automatically house owners system captures an image and alerts a voice message i.e., please wait, our owner will approve you. When the house owner receives an image of that person, then through android phone the house owner logs in and when he approves then the

person receives a message i.e., please welcome your allowed to enter into the home, so the door gets unlocked. Otherwise the person receives a message i.e., sorry! your not allowed to enter into the home. We use the hardware devices like Raspberry Pi, Pi Zero Cameras, GSM Module, and Android Phone.

For example, there are two members in a home i.e., first person and second person and home owner is the first person only he can unlock the door. Here the door is closed, So when the first person is in the other place and the second person is at the entrance of the door and wants to open. He can call to the first person and ask him to unlock the door, so that the first person logs in through the android phone and enters the password then the door is unlocked.

We use a software that displays how many times the door is locked and unlocked, and at what time the door is locked and unlocked.

II. LITERATURE REVIEW

1. Home Security Using Image processing and IOT

IOT has the low cost solution to prevent from the unauthorized persons. IOT helps in system design, and makes convenient to the user. If any information is present we can send it securely using this paper. The unauthorized person can be identified. Using pi camera we can identify the theft.

2. Design and implementation of door access control and security system based on IOT

Security systems are used by intelligent thieves and there are new methods to be invented to provide proper security to the homes and buildings etc. We can use the advanced technologies to improve the security to the extent level . The goal of this project is to provide the door access control and security by using IoT Server. The proposed system is implemented by using, password and security question with IoT. We can access the door locking system in the remote location itself. So that it is very easy for the users to access the data easily.

III. OBJECTIVES OF THE PROJECT WORK

- Using GSM we can make automated work.
- We can connect the locking devices to the internet and keep it secure.
- Using pi camera to the door it enables for the face detection..
- By using android app we can get the log in details.
 - Audio & Image Interaction
 - Gsm based smart communication using android

- Raspberry pi & pi cameras to handle smart communication
- Detailed log of user and owner communication
- Smart Email alerts

Applications and Advantages:

- 1) Applicable in Industries, Home, college, Buildings, apartments.
- 2) This is easy to use.

IV. STUDY AREA AND METHODOLOGY

- As We are implementing the project by raspberry pi and pi cameras it will give real time results without delay because GSM is 100% trusted network there won't be any delay and the solution we are implementing will give better results

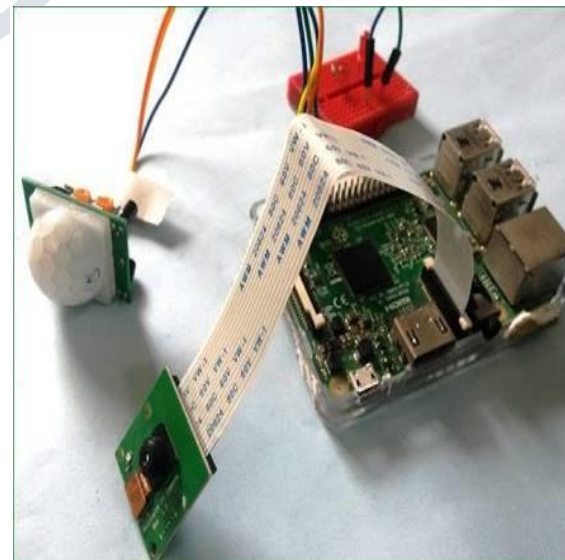


FIGURE:RASPBERRY PI & PI CAMERA

V. EXPECTED OUTCOME

- Expected outcome is secure and complete control on door, with our Software and hardware requirements we will achieve 100% control on the doors from smart phone from any remote location.
- It can be used in homes to minimize the human efforts.
- If the key is stolen, we wont get any problem because we are using smart door locking system.
- User can access the data from anywhere and anytime.
- Also Applicable for physically disabled people.

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