# HOME SECURITY FOR PHYSICALLY CHALLENGED PEOPLE WITH SERVOMOTOR

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**ABSTRACT**:- *In Current Scenario there is an active research in the area of computer vision applications. Security plays an important role in each and every aspect of our day-to-day life. In the present world there are lot of incidents like Robbery, entry of unauthorized persons in restricted areas etc. we are using non-living things such as smart cards, plastic cards, PINS, tokens, keys for authentication and accessing in the restricted areas like ISRO, NASA, and DRDO etc. Traditional security systems require user key, a security password, an RFID card or ID card to access the system, Meanwhile these security systems have some disadvantages; for example, they can be forgotten or stolen by an unauthorized people. As a result, there is a need to develop software that guarantees a higher security level. Once you may forget to keep your RFID card but you will never forget to bring a face with you. God has given everyone a unique face. Face is the most important part of our body, so that it can reflect many emotions of a person. On analyzing various technologies, human face perception is an elegant as well as growing computer technology. It detects facial features and ignores anything else such as buildings, trees and bodies. Our goal is to implement a system using face detection and recognition which would automatically verify a person. On the other hand, this system would be efficient as well as cost effective, which tends to overcome all the disadvantages of the existing system. The main aim of face detection and face recognition is to detect and extract specific features of the face since it is considered as the key requirement in many applications.*

***Terms of Index*** *— Internet of Things (IOT), Raspberry Pi, Wireless Door Control, Safety Controls, Wi-Fi, PIR Sensor, Human Detection*

## 1. INTRODUCTION

Crime has become super new in this modern world too! In this present time a lot of accident, including theft, happens suddenly stealing unwanted entry. People still remain busy in their day-to-day work, and they always want to make sure their beloved things are safe. Sometimes they fail to take care of their needs such as keys, wallet, credit cards etc. For these, they can't reach their home or wherever they want. But face recognition means complex algorithms and sometimes the device might not be able to correctly detect visitor identity and keep the computer chip occupied for longer periods of time. Within this paper a new framework is built that would monitor the door without any difficulty across the internet. From anywhere in this world the user can see who is steps at his entrance. The device holds a visitor picture as evidence that would be needed if any unexpected event, such as theft, robbery etc., were to occur. The user can monitor the door by smartphone, laptop, etc. The door may also be opened by a single and easy order for some form of accident such as fire or stolen keys.

## 2. OVER ALL PROJECT OUTLINE

Different input and output are interfaced in this project with a Minicomputer raspberry pi. Calling bell, PIR sensor & wireless camera is in the input portion. A minicomputer raspberry pi is used in the processing portion. Raspberry pi comes with a Wi-Fi dongle. And there are also Lcd, magnetic door lock, email & tweeting facilities on the output screen. A calling bell is mounted on the door so that if anyone meets the user the person presses the bell and the bell produces a raspberry pi signal signaling a person's presence. There is also another form of human sensing, which is a passive infrared sensor for human motion detection. When any intruder tries to break into the house PIR sensor will detect the human's movement and send an alert to raspberry pi. The Wireless camera is the most significant input tool. It is used to watch video stream and it also takes a snapshot of that person and transmits it to raspberry pi whenever a person arrives. Raspberry pi handles these inputs like when a calling bell is received as input it transmits a signal to a wireless camera to capture a visitor's face. In the time the picture is received, it produces a Tweet alerting the user that somebody arrived in front of the door. If the image has been received, raspberry pi sends a mail to the user attaching the image. User can manage the magnetic lock through twitter. If the user wants to give the visitor access he can turn the lock on and if he wants to deny access for some reason the user will reveal the reason for LCD tweeting a visitor's text. A buzzer and LED is connected to indicate the person at door for deaf and blind people.

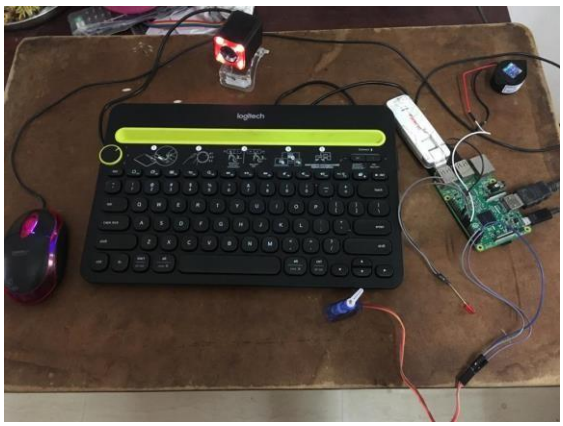

**Fig1.** Hardware connection

### 3. SOFTWARE DISCRIPTION:-

a. Raspbion pi os

b. Python

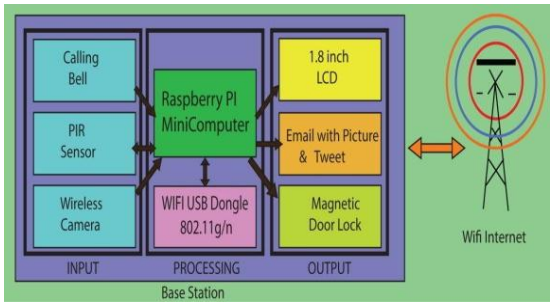


**Figure 2**. Main Project Outline

### 4. HARDWARE USED:-

a. Raspberry pi

b. WIFI dongle

c. PIR sensor

d. Servomotor

e. Camera

### 5. CONCLUSION:-

Raspberry Pi is proposing a high-performance face recognition system based on the extended local binary pattern, called LBP, in this project. The system is split into three parts, face detection, extraction function and facial recognition. The entire algorithm above is achieved with high efficiency**.** As discussed in this paper earlier, Raspberry Pi is used with the aid of a python for face detection and recognition. If the face matches the trained images database, it gives the voice performance of the name of the person. If it is an unauthorized user, it means that it says that it is unknown. It would help to make the visually impaired person not reliant on others. This also lets the visually impaired people read the books using tesseract, an OCR engine.

### 6. REFERENCES:-

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