iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 7 **Issue:** IV **Month of publication:** April 2019

DOI: https://doi.org/10.22214/ijraset.2019.4150

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887
Volume 7 Issue IV, Apr 2019- Available at www.ijraset.com

Design & Implementation of Smart Attendance System based on Raspberry Pi 3B Module

Ekta Sukhadeve[1], Prachi Paunikar[2], Priyanka Maske[3], Swarna Wadibhasme[4], Tejaswe Tembhurne[5]
[1, 2, 3, 4, 4]*Department of Electronics Engineering, JD College Of Engineering And Management, Nagpur-441510, Maharashtra,India.*

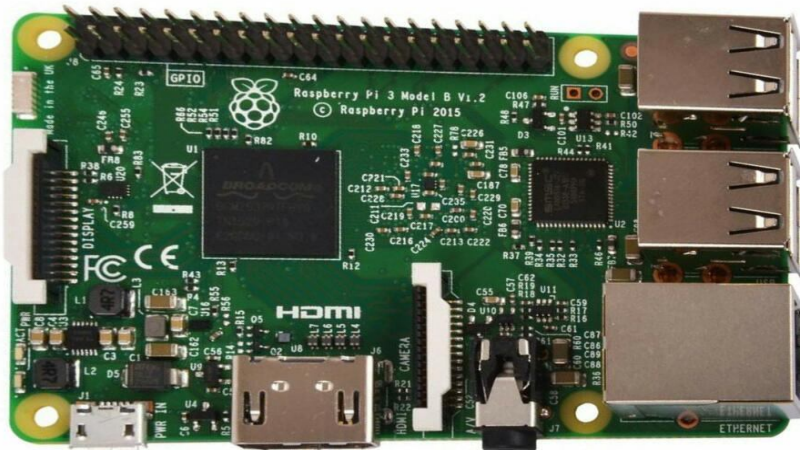
***Abstract:** Biometric system is used in now a days, the system such as voice reorganization, fingerprint key password etc. Now face recognition system is in trend in any type of organization. The face reorganization system is based on authentication and identify the person with proper features in the database and mark the attendance. The aim of the this paper for implement on the platform of Raspberry Pi module which is more simple.it has cpu which is system on chip is BCM2825,ARM11 Quad core processor The camera is pi camera is connect in camera interface port to capture the image, to detect, to recognize in real time.*
***Keywords:** System on Chip, CPU, ARM11.Picamera, Wifi module.*

I. INTRODUCTION

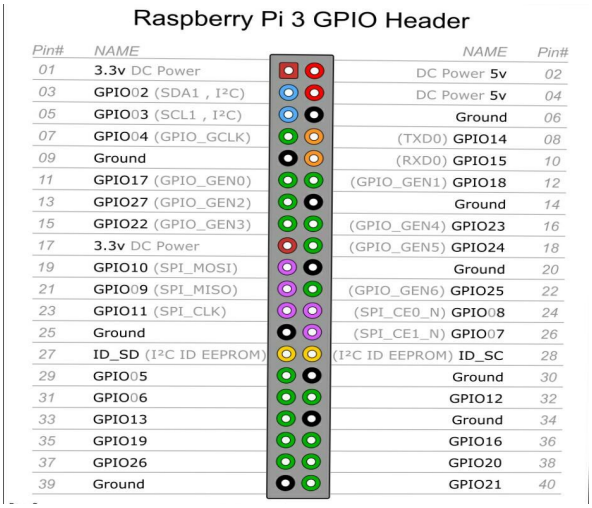
Present day attendance is mark manually, because of that a amount of time is considered both teacher and student for mark the attendance. that's why some chance to mark attendance as proxy if the student not there in the class. To overcome this problem we implement the system Smart attendance system using face recognization As we know face is a only one proof for any human to mark attendance. We make the system various hardware platform but we use the platform of Raspberry pi 3module B. It is a credit card sized minicomputer. The system is placed where the student enter and exit so that proper image is to be captured and attendance is marked one by one by face reorganization algorithm and data will be send via mail using internet to the head of the department/principle. A pi camera is used for capture the image of the student and mark the attendance. A wifi module is used to send the data through internet to the server.

II. SYSTEM DISCRIPTION

1) *Raspberry pi:* The Raspberry pi is a minicomputer having system on chip CPU 64 bit of Quad core A53 ARM11 processor on chip RAM which is 1Gb, 4 USB port on chip ethernet 10/100mbps speed ,it is having 40 pin 17 pins are GPIO pins and remaining are special function pin. Below fig. Shows the raspberry pi 3B module and their pin structure



©IJRASET: All Rights are Reserved



2) *Pi Camera***:** The Camera Module can be used to take high-definition video, as well as stills photographs... It supports 1080p30, 720p60 and VGA90 video modes, as well as still capture. It attaches via a 15cm ribbon cable to the CSI port on the Raspberry **Pi**.

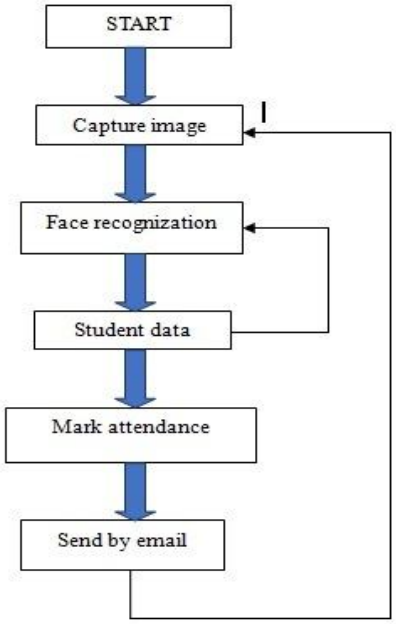


3) *Wi-fi Module:* The **Raspberry Pi 3** comes with an on-board 802.11n Wireless LAN adapter, which means that it's no longer necessary to purchase a separate **WiFi** dongle. It's also quite a bit easier to set up.

III. FLOW CHART



©IJRASET: All Rights are Reserved



1) Algorithm: This section describe the algorithm followed by system they are:

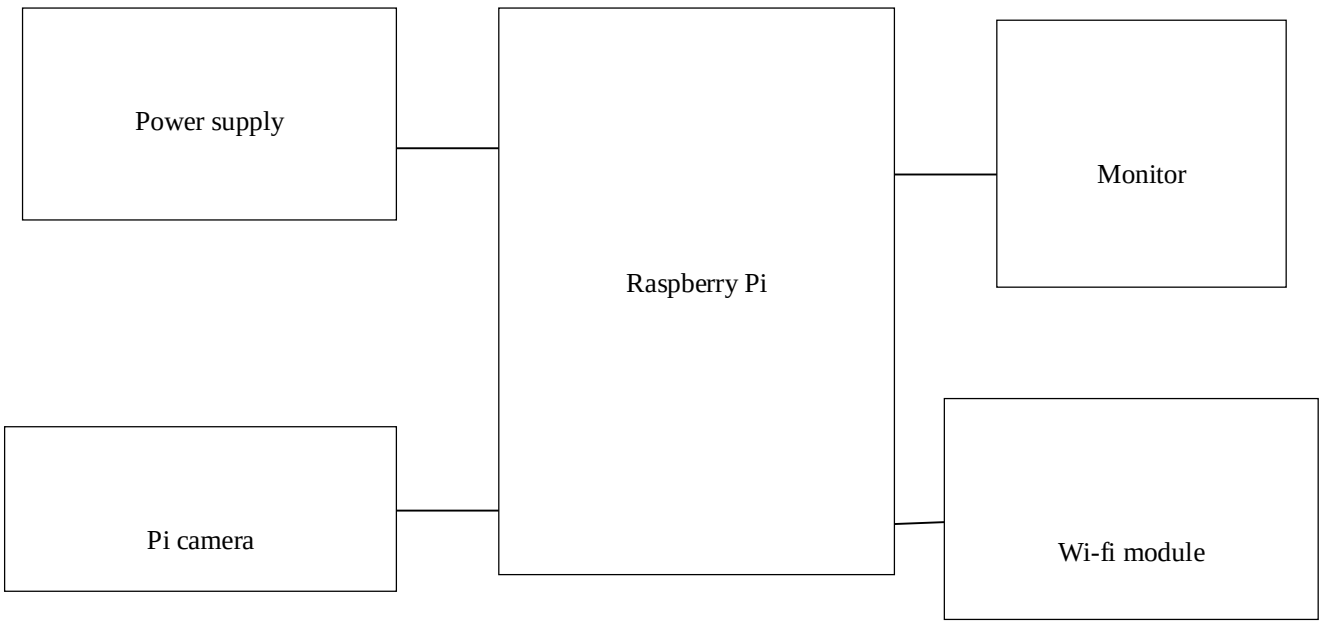
a) Capture the image in camera

b) Detect the face and check the student data recognize and mark attendance

c) Stored the result in database

d) Send the data via mail to head of department/ Principle

Block Diagram



©IJRASET: All Rights are Reserved

IV. CONCLUSION

Attendence system using face recognization using Raspberry pi based technique proved that the it is time saving and secureed system in real time.

A. Future Scope

In the future work is to improve recognization rate by using infrared camera interfacing also make the algorithm to capture the more than one image or group image at same time so that time also consuming and improve the performance.

REFERANCES

[1] Prof. Arun Katara1 , Mr. Sudesh V. Kolhe2 , Mr. Amar P. Zilpe3 , Mr. Nikhil D. Bhele4 , Mr. Chetan J. Bele5. Attendance System Using Face Recognition and Class Monitoring System. IJRITCC. ISSN: 2321-8169 Volume: 5 Issue: 2 273 – 276.

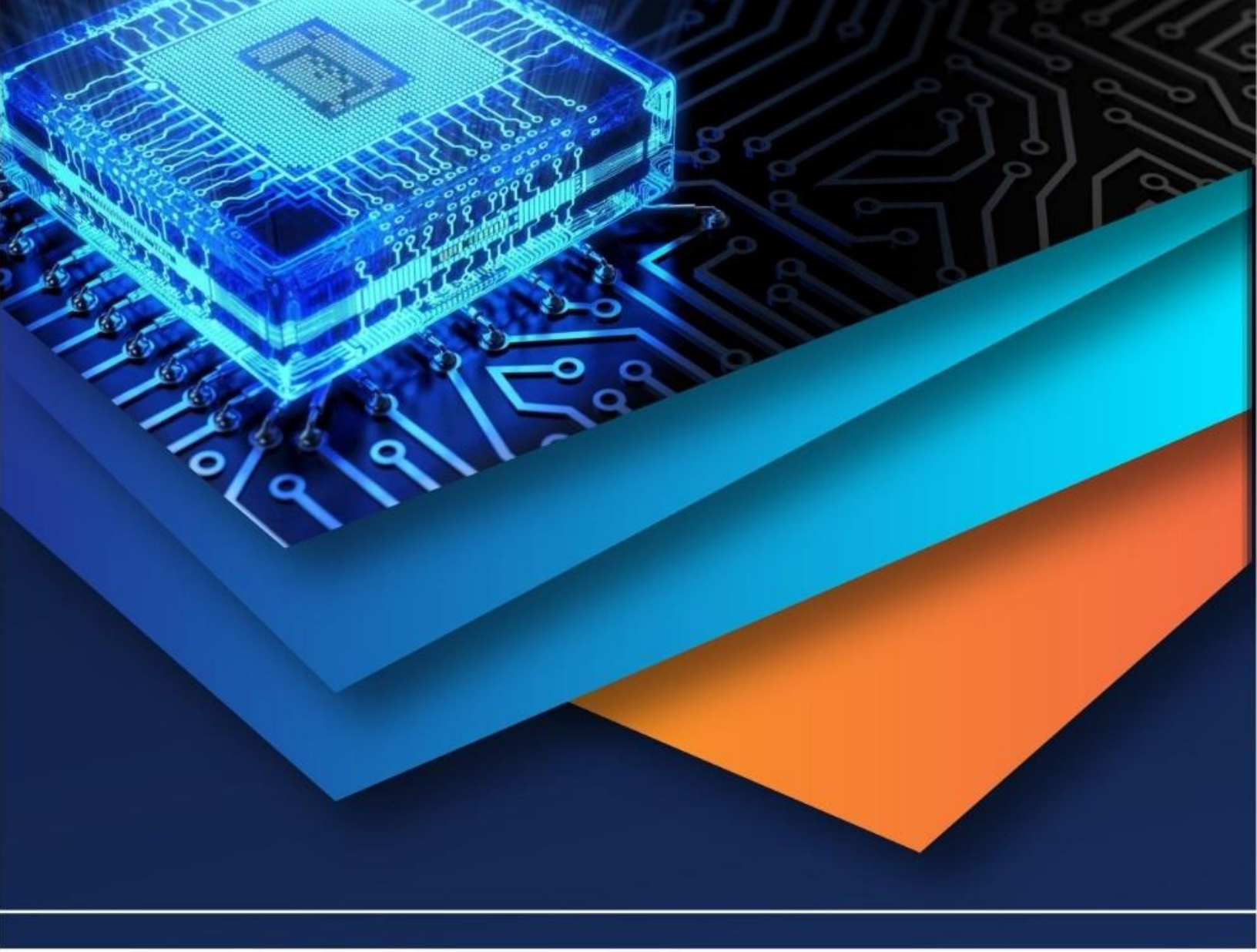
[2] B. K. Mohamed and C. Raghu, "Fingerprint attendance system foe classroom need," in India conference, 2015 Annual IEEE, IEEE.

[3] Amit Kumar, P.K. Varma, Srinivas Perala, P. R. Chadha, "Automatic Attendance System By Visual Programming Language LabVIEW," in IEEE International Conference On Power Electronics, Intellegent Control and Energy System 2016

[4] Preeti Mehta, Dr. Pankaj Tomar. An Efficient Attendance Management Sytem based on Face Recognition using Matlab and Raspberry Pi 2. IJETSR. ISSN 2394 – 3386 Volume 3, Issue 5 May 2016

[5] MONKALLAS PRAVEENA1 , TALLAPELLI SURESH2. Face Recognition System using Raspberry PI and Principle Component Analysis. ISETR. ISSN 2319-8885 Vol.04,Issue.23, July-2015, Pages:4475-44

©IJRASET: All Rights are Reserved



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)