K.RAMAKRISHNAN COLLEGE OF TECHNOLOGY

(AUTONOMOUS)

IoT BASED SMART CLASSROOM AUTOMATION

PRESENTED BY :

Arun Prakash B (811718105011)

Balaji J (811718105051)

Hanifa Asraf Ali M (811718105019)

Prakash R (811718105030)

UNDER THE GUIDANCE OF ..,

Mr. R. JaiGanesh M.E.,

Asst. Professor,

Dept. Of EEE

PRESENTATION OVERVIEW

- Abstract
- Objective
- Literature survey
- Existing system
  - Block diagram of existing system
  - Disadvantages of existing system
- Proposed system
  - Block diagram of proposed system
  - Explanation of proposed system
  - Advantages of proposed system
- Simulation Model and Output
- Hardware Model and output
- Snapshot of Hardware model
- Reference

ABSTRACT

- Smart classroom is the representative of **the modern teaching**. With the advent of modern technology it becomes easier for the students as well as teachers to perform their **task more efficiently**.
- With the aid of modern technology it has **become easier** for the students and teachers across the world to get a good **grasp of the theoretical** as well as practical knowledge.
- The smart classroom is rectification to **various problems** that teacher as well as student **faces inside the classroom**.
- This projects aims to make use of the modern technology for **helping the teachers** in utilizing more time for teaching and students to easily get access to the study material.

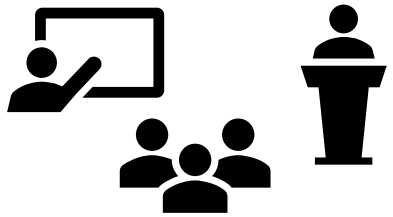
PROBLEM IDENTIFICATION

ATTENDANCE

ERASING BOARD

LIBRARY MANAGEMENT SYSTEM

NOT WEARING MASK



AVAILABILITY OF STAFF PRESENCE

EMOTION DETECTION

OBJECTIVE

This Project has Six Objectives:

- The first objective of the project is to automatically take attendance from students using **RFID and record attendance**.
- The Second objective is to **erase the blackboard** automatically.
- The Third objective is to **ensure Face mask is wear or Not** & Students Mentality via Face Expression.
- The Fourth objective is to **Manage the Library system in Online Mode**.
- The Fifth objective is to **Finding the Staff Presence via Online**.
- The last objective is to be **overall cost effective**.

LITERATURE SURVEY

Title: "Intelligent Classroom Management System"

Author: Md. Nahal Islam, Farah Tabassum, Gourab Kumar Sarker, Dhrubashish Sen

Theme: The Intelligent Classroom management system has three main objectives that will be explained in details in the paper

Title: " Classroom automation using voice commands"

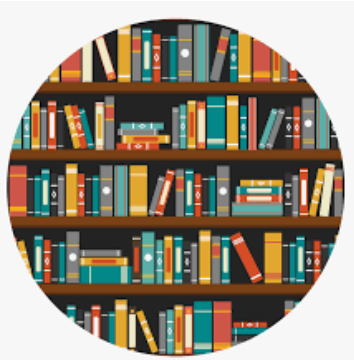
Author: S.B.Chaudhari, Saurabh Khulpe, Pratik Patki, Kaustubh Kale , Dinesh Malage

Theme: In Paper, students will make a home automation project, where they will be controlling the home appliances using voice commands on the smartphone.

CONVENTIONAL SYSTEM

MANUAL ATTENDANCE

MANUAL CHECKING

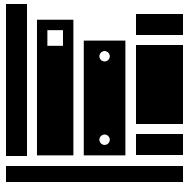


LIBRARY

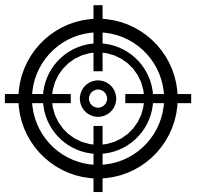
DISADVANTAGES

TIME WASTE

DIFFICULT TO FINDING



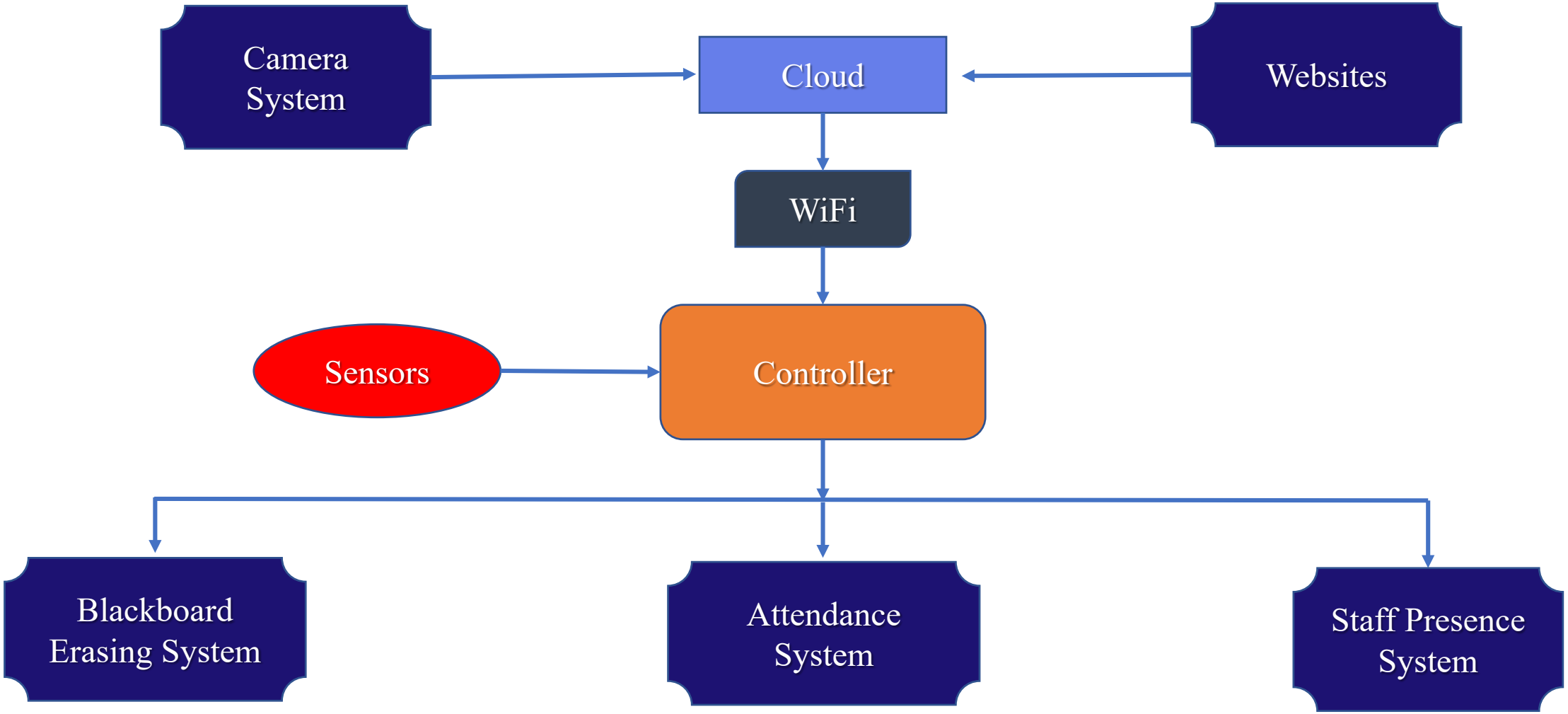
PLACE & BOOKS



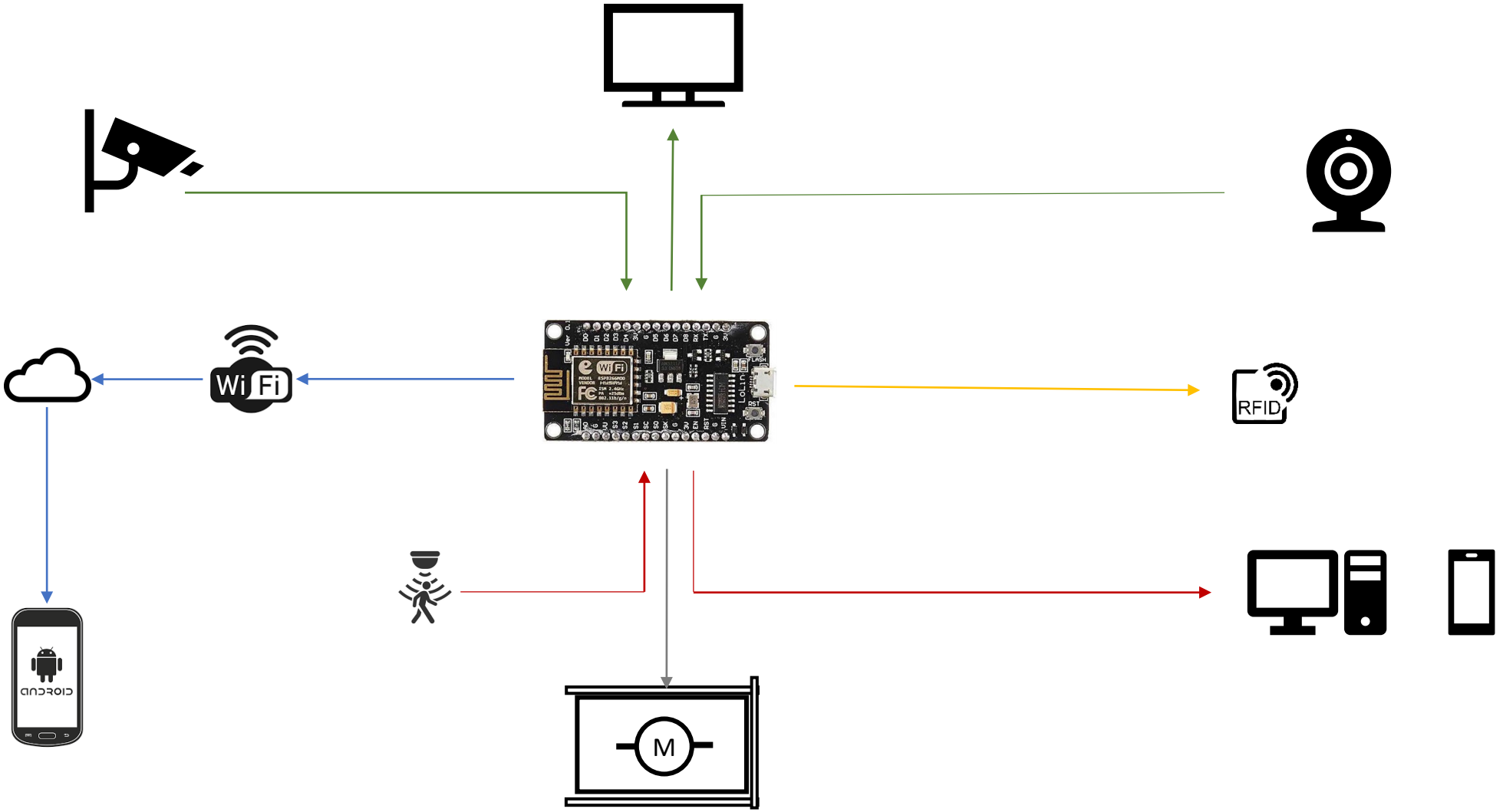
NOT PERFECT

PROCEDURE FLOW

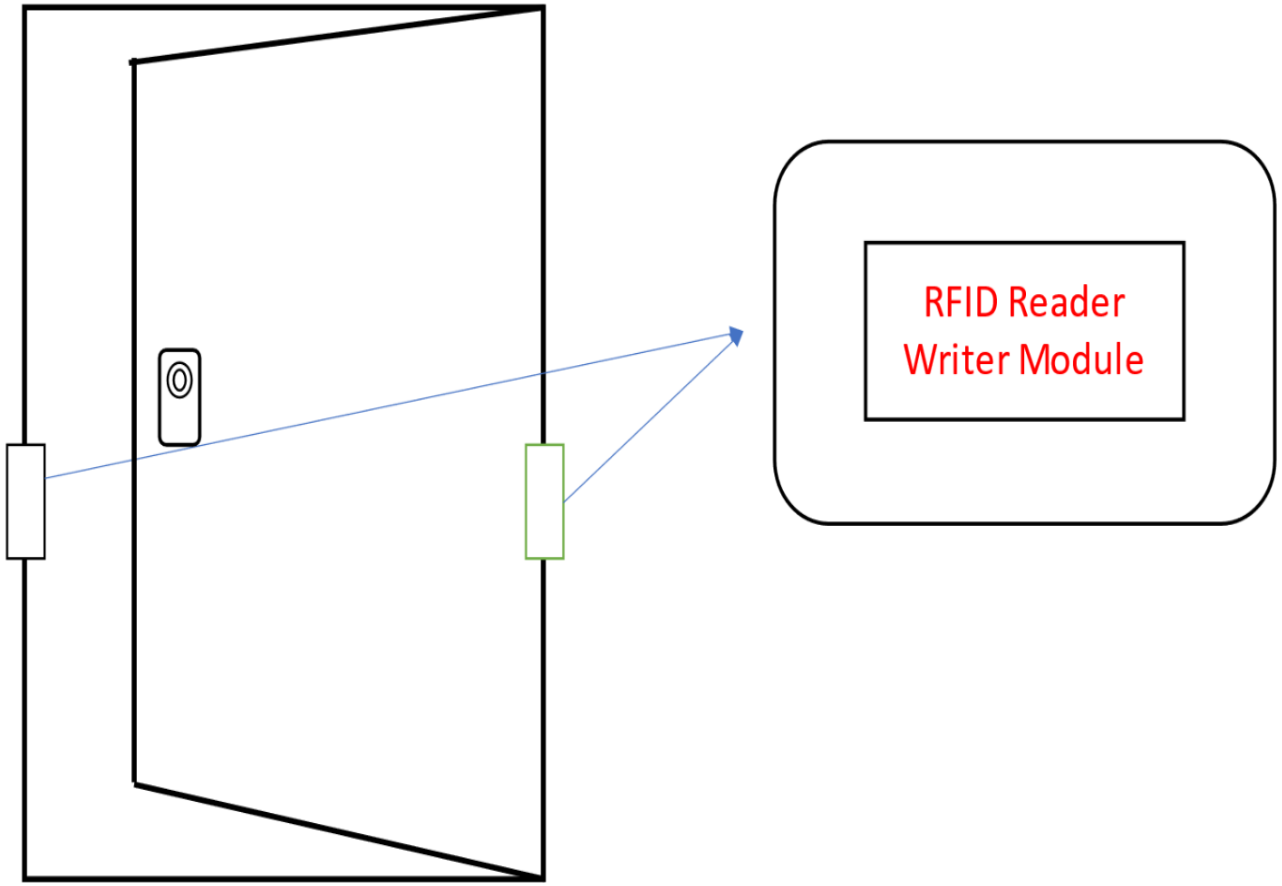
PROPOSED SYSTEM



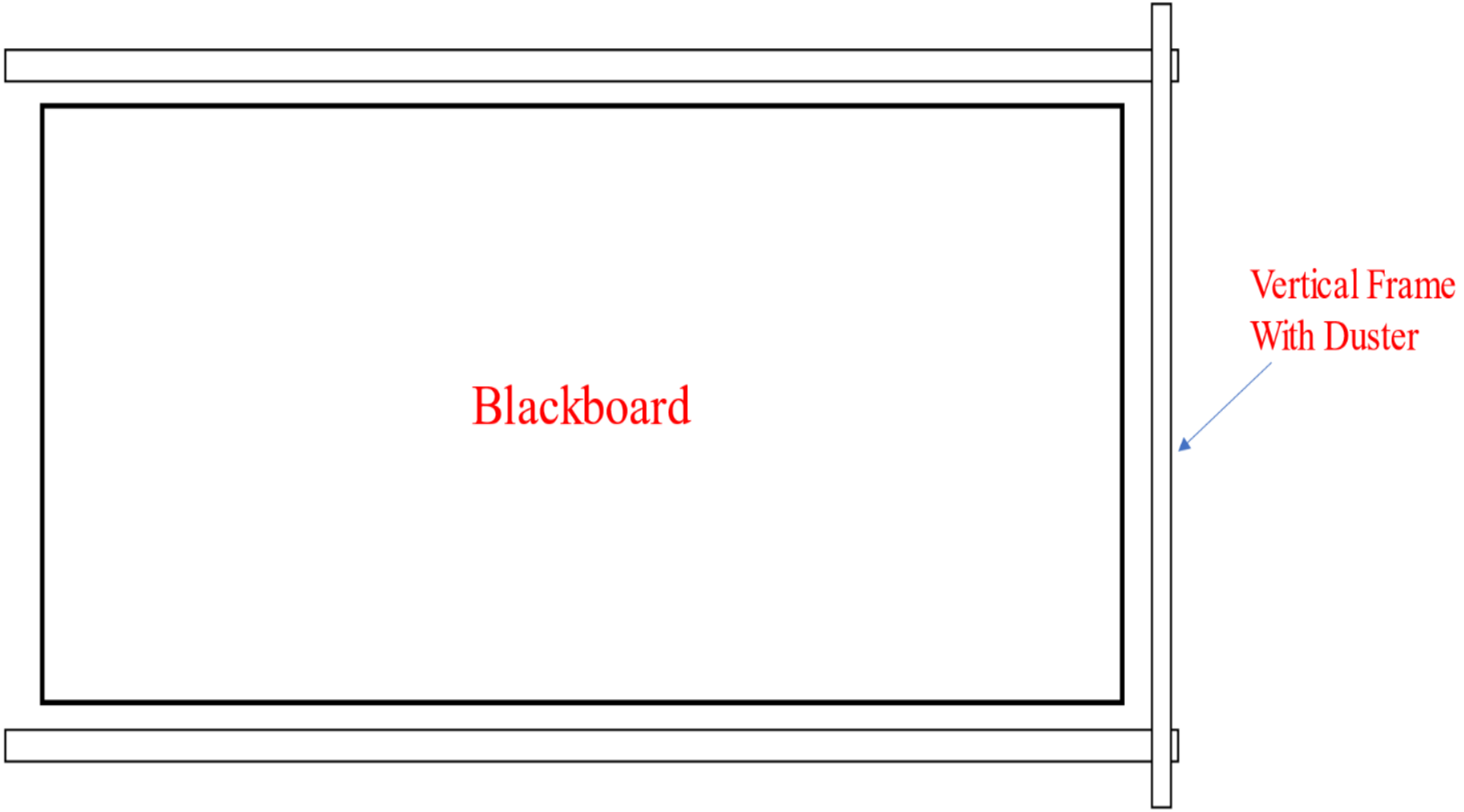
EXPLANATION OF PROPOSED WORK



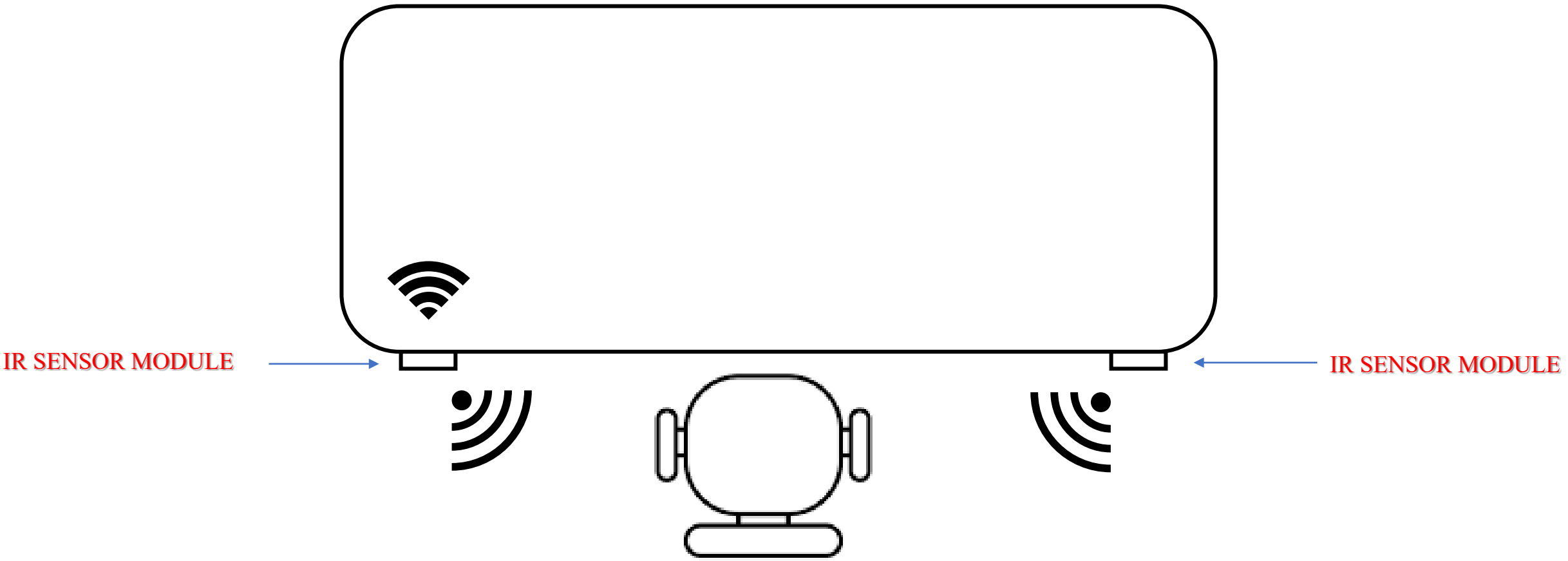
AUTOMATIC ATTENDANCE SYSTEM



AUTOMATIC BLACKBOARD ERASING SYSTEM

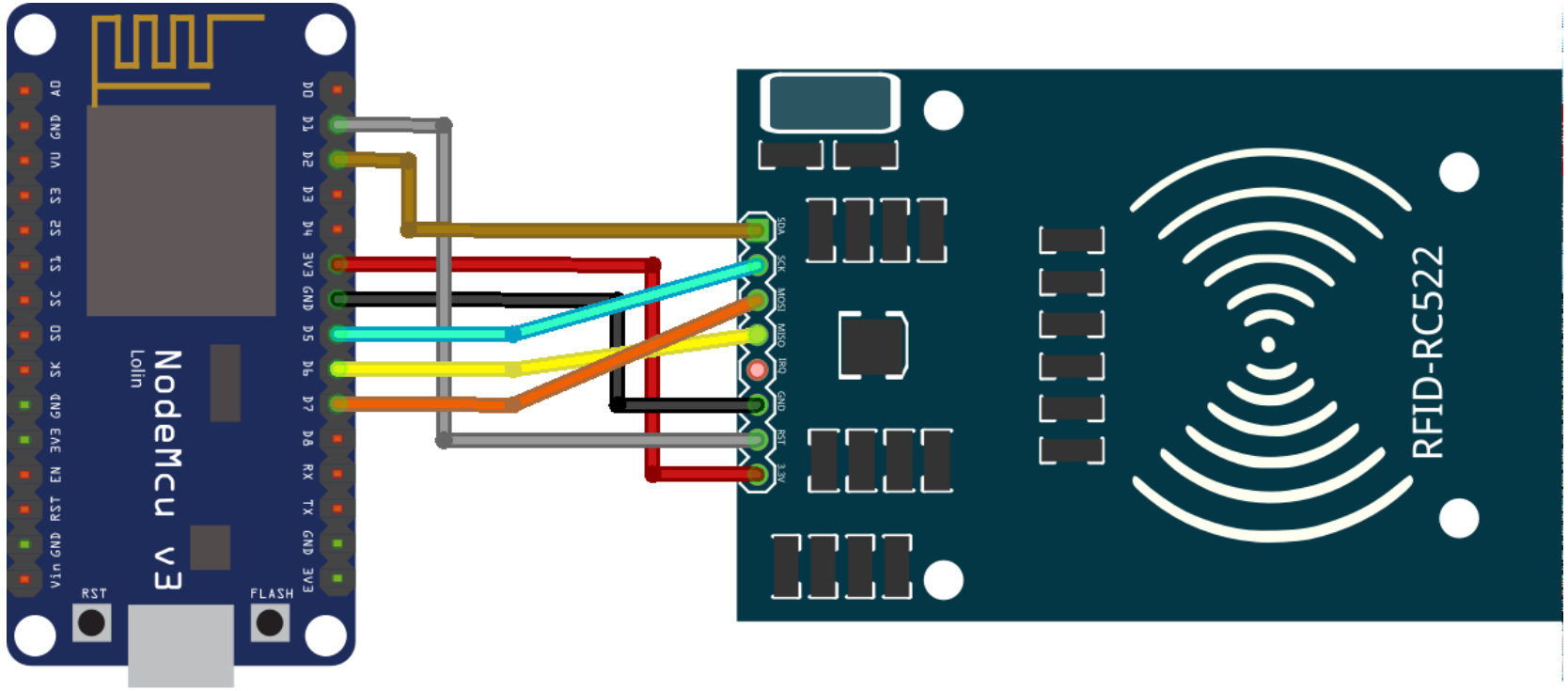


FINDING THE STAFF PRESENCESYSTEM



EXPLANATION OF PROPOSED WORK

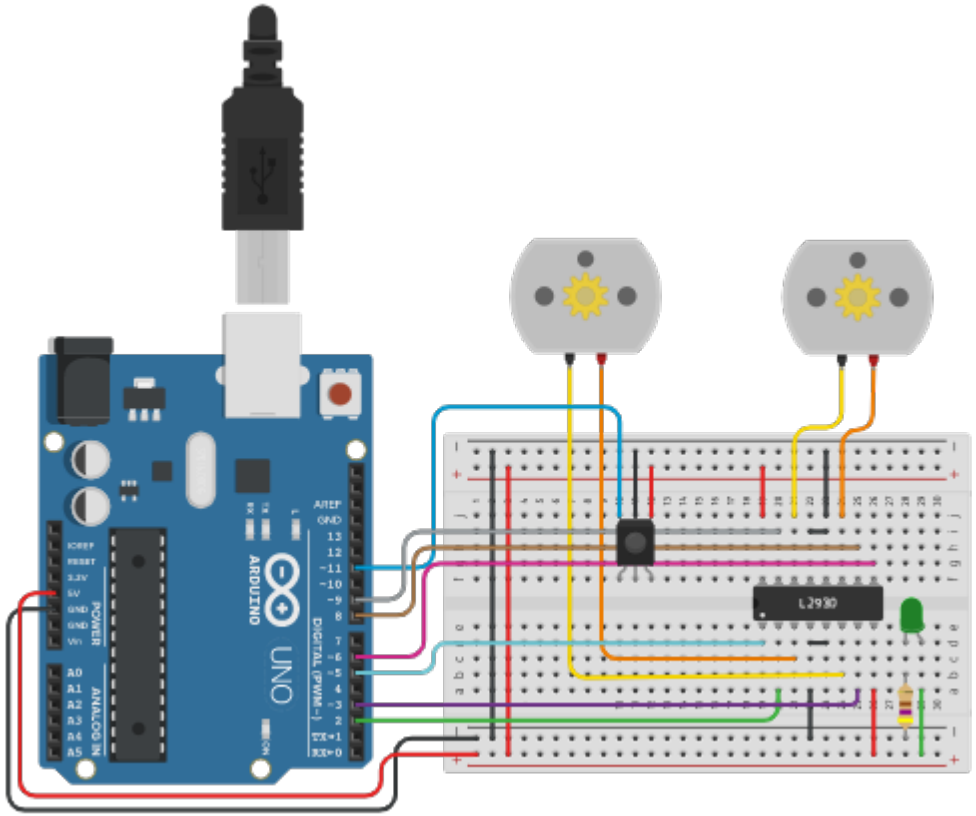
Module - I



RFID BASED ATTENDANCE

EXPLANATION OF PROPOSED WORK

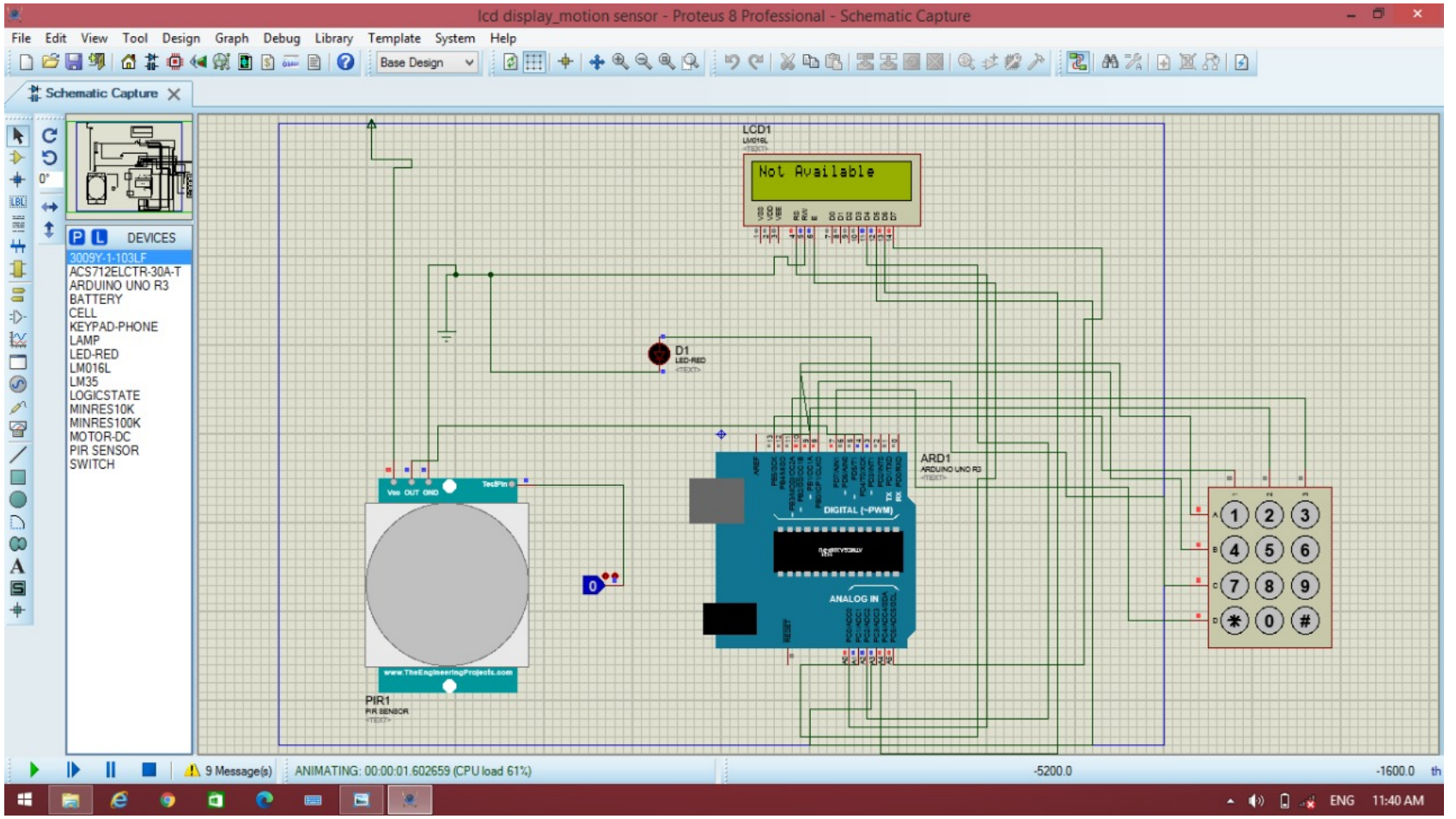
Module - II



DC MOTOR CONTROL USING L293N

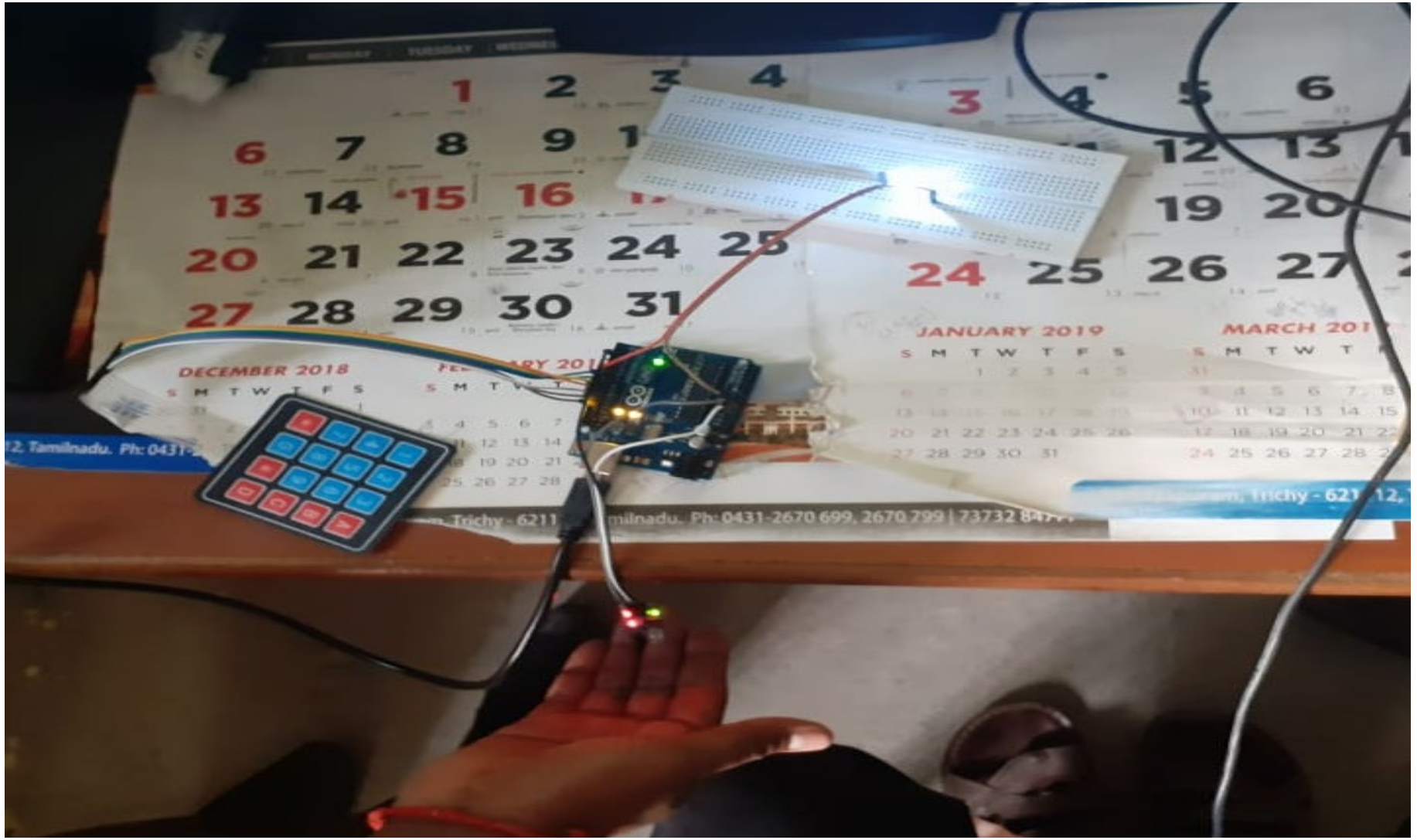
EXPLANATION OF PROPOSED WORK

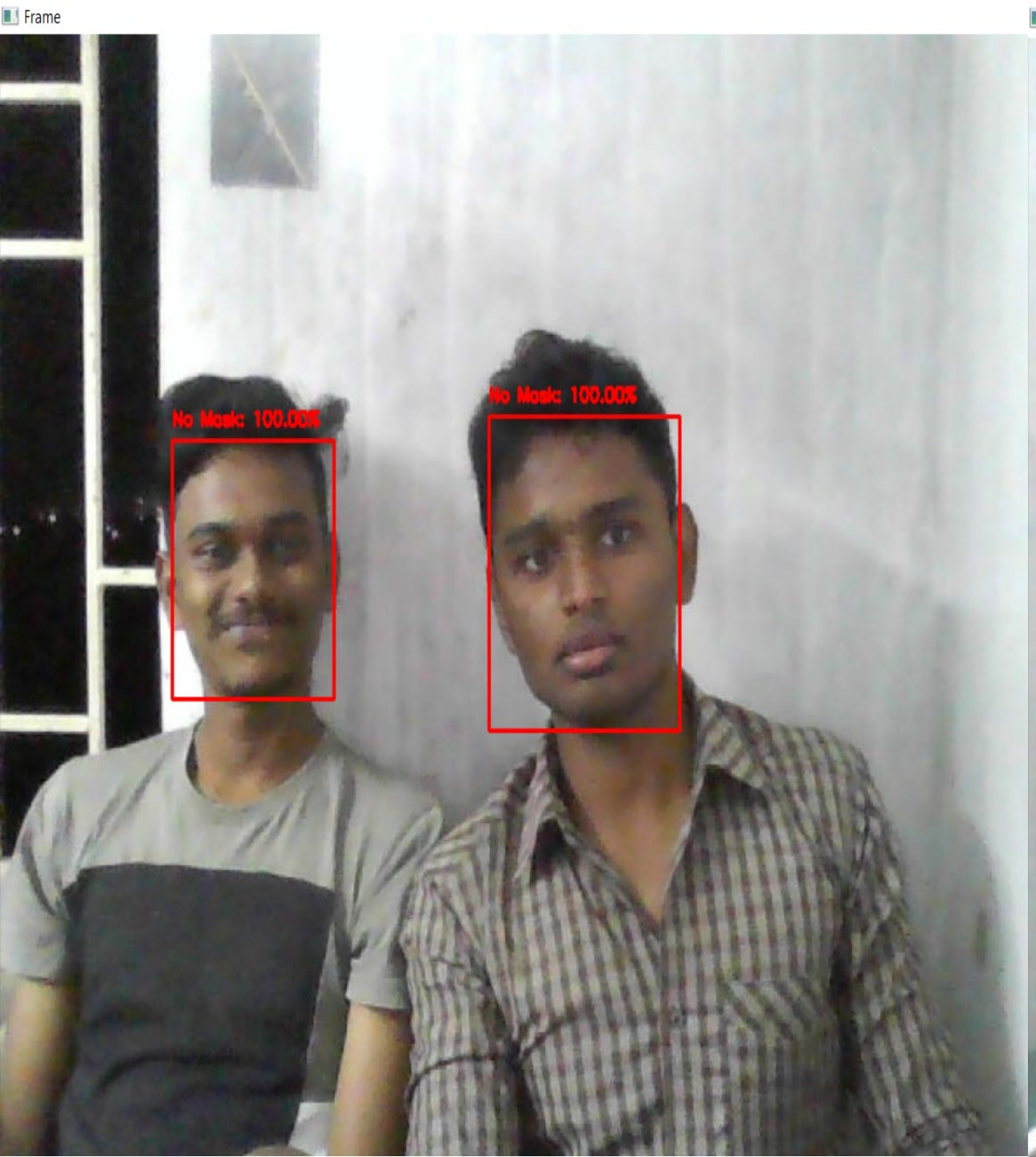
Module - III



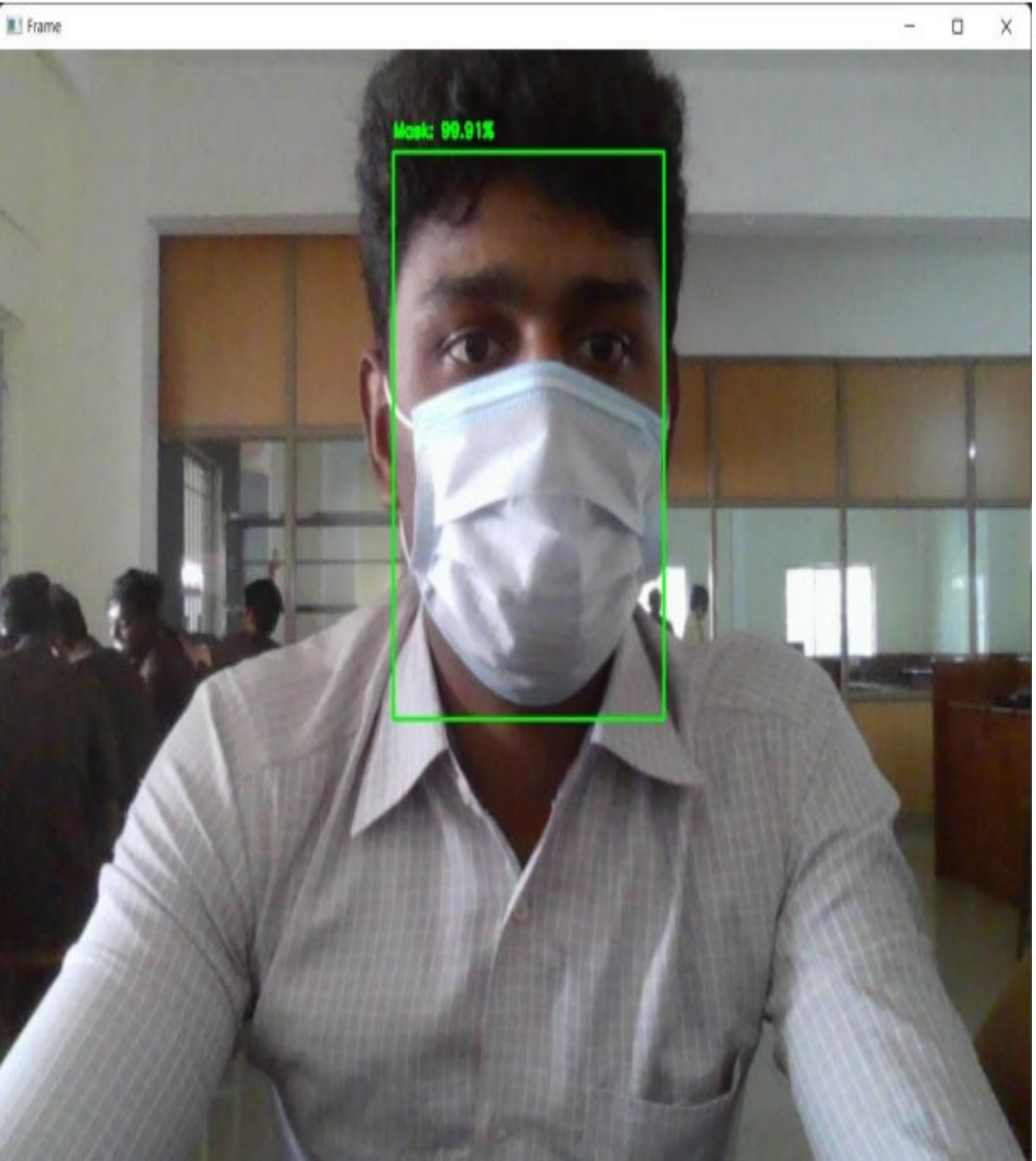
IR & KEYPAD INTERFACE WITH ARDUINO UNO R3

HARDWARE OUTPUT



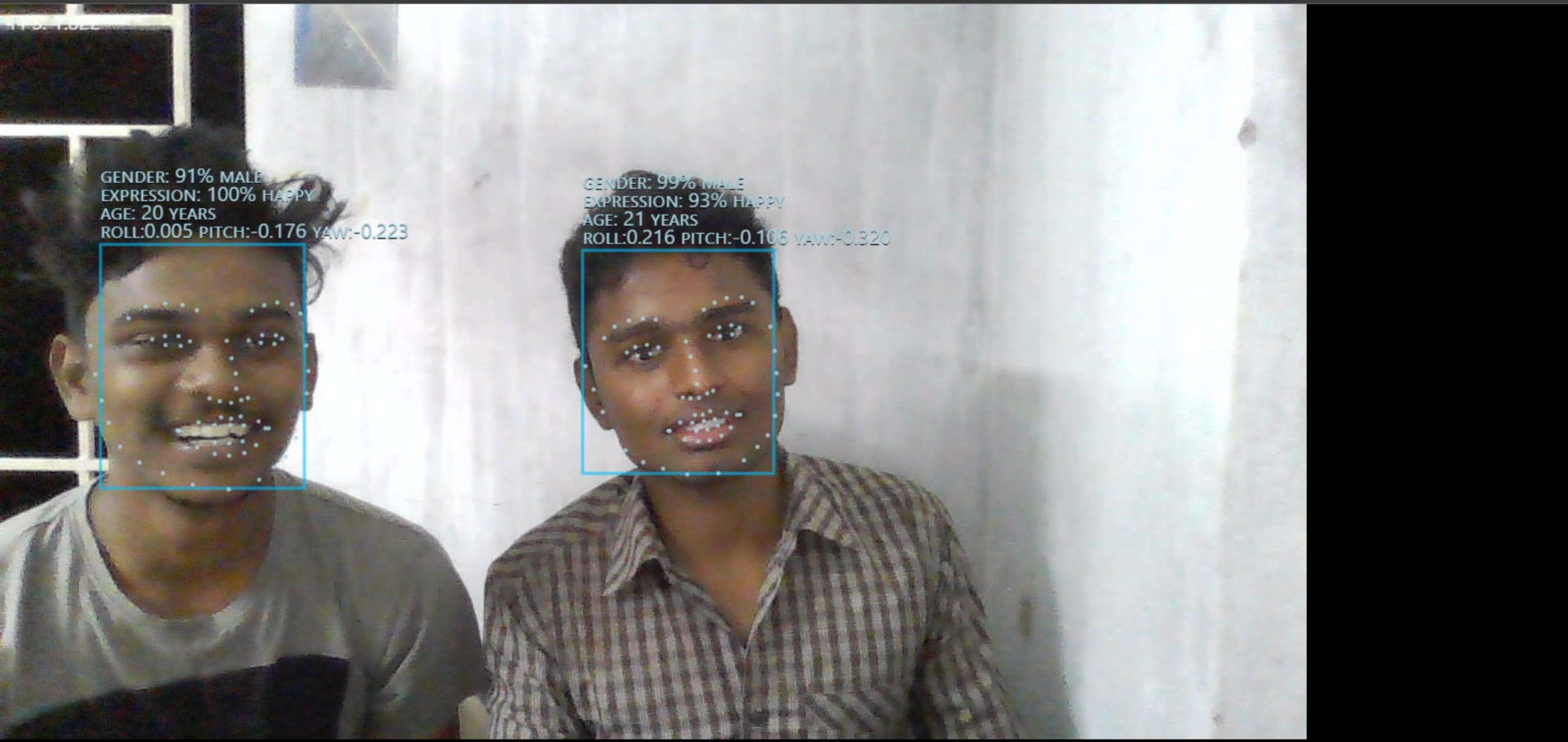

Frame
No Mask: 100.00%
No Mask: 100.00%

Frame
No Mask: 100.00%
No Mask: 100.00%


Frame
Mask: 99.91%

Frame
Mask: 99.80%

GENDER: 98% MALE
EXPRESSION: 100% NEUTRAL
AGE: 15 YEARS
ROLL:-0.032 PITCH:-0.170 YAW:-0.155
GENDER: 97% MALE
EXPRESSION: 82% NEUTRAL
AGE: 26 YEARS
ROLL:0.179 PITCH:-0.073 YAW:-0.254


GENDER: 91% MALE
EXPRESSION: 100% HAPPY
AGE: 20 YEARS
ROLL:0.005 PITCH:-0.176 YAW:-0.223
GENDER: 99% MALE
EXPRESSION: 93% HAPPY
AGE: 21 YEARS
ROLL:0.216 PITCH:-0.106 YAW:-0.320

GENDER: 96% MALE
EXPRESSION: 98% NEUTRAL
AGE: 27 YEARS
ROLL:-0.078 PITCH:-0.151 YAW:-0.263
GENDER: 98% MALE
EXPRESSION: 51% SURPRISED
AGE: 15 YEARS
ROLL:0.100 PITCH:-0.065 YAW:-0.338

GENDER: 98% MALE
EXPRESSION: 51% ANGRY
AGE: 22 YEARS
ROLL:0.055 PITCH:-0.138 YAW:-0.040
GENDER: 93% MALE
EXPRESSION: 76% ANGRY
AGE: 27 YEARS
ROLL:0.148 PITCH:-0.096 YAW:0.019

172.16.1.2 | datamagic202 | TNPSC - Tamil | https://apply.t | Student Partic | Site overview | KRCT EEE || Lib | EmotionDetec | Prakash
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RFID Attendence System

Welcome to Our Classroom

ENG IN 21:18 08-03-2022

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RFID Attendence System

User Data Table

Name	ID	Gender	Email	Mobile Number	Action
Prakash Ravichandran	C787DE1E	Male	prakashravichandran253@gmail.com	+919360230757	Edit Delete

ENG IN 09:37 29-05-2022

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RFID Attendence System

Registration Form

ID: Please Tag your Card / Key

Name:

Gender: Male

Email Address:

Mobile Number:

Save

RFID Attendence System

Please Tag to Display ID or User Data

User Data		
ID	:	--------
Name	:	--------
Gender	:	--------
Email	:	--------
Mobile Number	:	--------

The Website PINK

(Passion , Inteligence, Nobility and Knowledge)

Pleasant Welcome! to you to this EEE Blog

This blog is created by Students of Department of Electrical and Electronics Engineering of K.Ramakrishnan College of Technology with the support and Guidance of our respected faculty mentors.

With the objective of creating a knowledge hub where the user can find our collection of recent advancements in the field of Electrical and Electronics Engineering, Our achievements as proud students of EEE - KRCT, Online courseware of our Curriculum, Our Faculty contribution in students development and many more exciting contents..

Refresh

ENG IN 09:38 29-05-2022

R2020 BE EEE CURRICULUM AND SYLLABUS

View

R2020 ME EST CURRICULUM AND SYLLABUS

View

R2020 ME PED CURRICULUM AND SYLLABUS

View

First Semester

- COMMUNICATIVE ENGLISH
- MATHEMATICS-I
- ENGINEERING PHYSICS
- ENGINEERING CHEMISTRY
- PROBLEM SOLVING AND FUNDAMENTALS OF C PROGRAMMING
- BASIC CIVIL AND BASIC MECHANICAL

Second Semester

- TECHNICAL ENGLISH
- MATHEMATICS-II
- PHYSICS FOR ELECTRICAL ENGINEERING
- ENVIRONMENTAL SCIENCE AND ENGINEERING
- CIRCUIT THEORY
- ENGINEERING GRAPHICS

Third Semester

- ELECTROMAGNETIC FIELD THEORY
- COMPUTATIONAL THINKING USING PYTHON
- SEMICONDUCTOR DEVICES AND CIRCUITS
- TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS
- DIGITAL ELECTRONICS

Fourth Semester

- CONTROL SYSTEMS
- DC MACHINES AND TRANSFORMERS
- GENERATION, TRANSMISSION AND DISTRIBUTION OF ELECTRIC POWER
- STATISTICS AND NUMERICAL METHODS
- OBJECT ORIENTED PROGRAMMING
- LINEAR INTEGRATED CIRCUITS AND APPLICATIONS

Fifth Semester

- DIGITAL SIGNAL PROCESSING
- INDUCTION AND SYNCHRONOUS MACHINES
- POWER ELECTRONICS
- POWER SYSTEM ANALYSIS
- PROFESSIONAL ELECTIVE – I

Sixth Semester

- POWER SYSTEM OPERATION AND CONTROL
- SOLID STATE DRIVES
- OPEN ELECTIVE – I
- SPECIAL ELECTRICAL MACHINES
- EMBEDDED SYSTEMS

Seventh Semester

- INDUSTRIAL AUTOMATION
- RENEWABLE ENERGY SYSTEMS
- OPEN ELECTIVE – II
- PROFESSIONAL ELECTIVE – III
- PROFESSIONAL ELECTIVE – IV

Eighth Semester

- EEGUC
- SMART GRID
- HVDC
- FACTS
- PROJECT WORK

திருக்குறள்

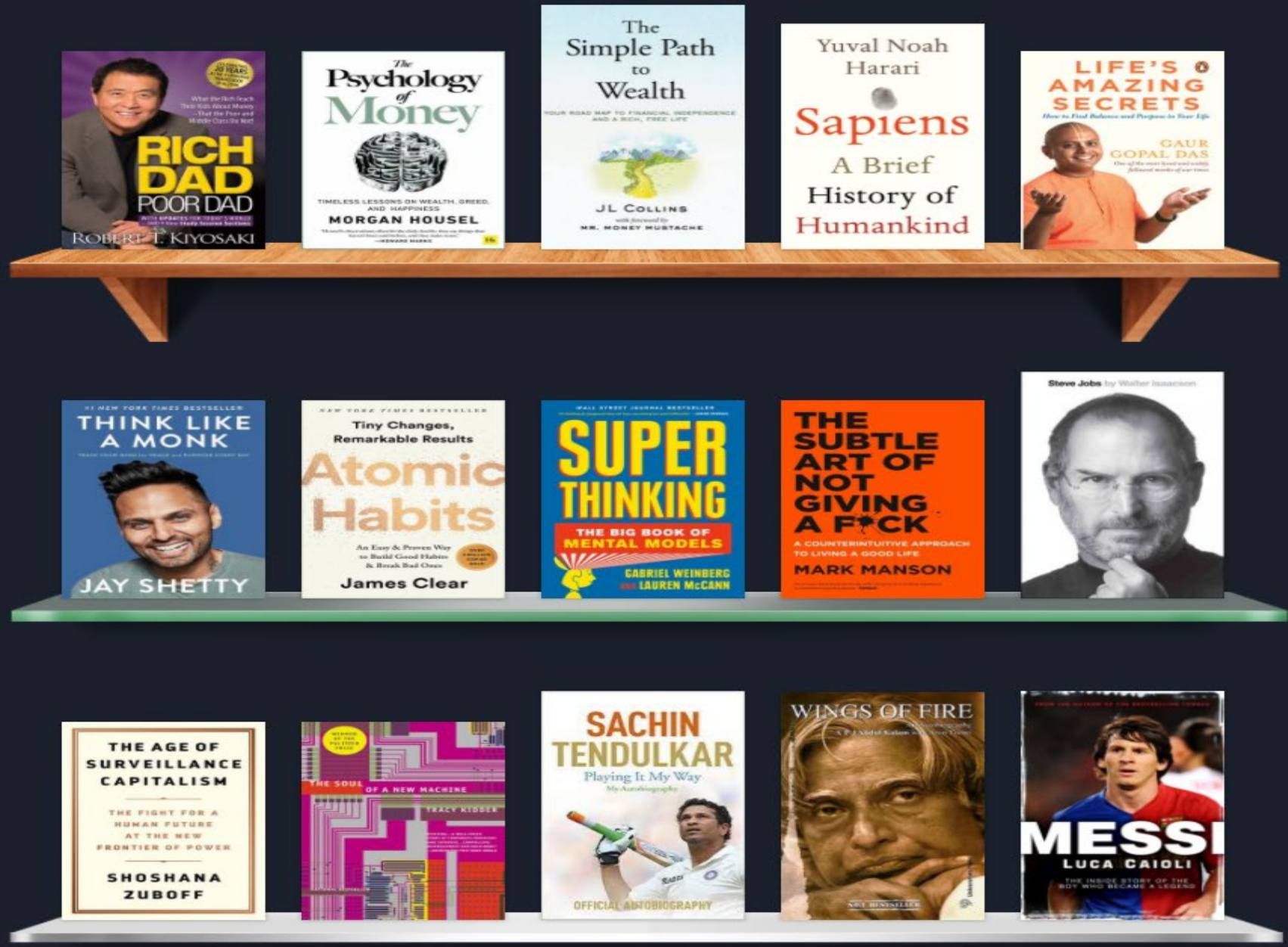
View

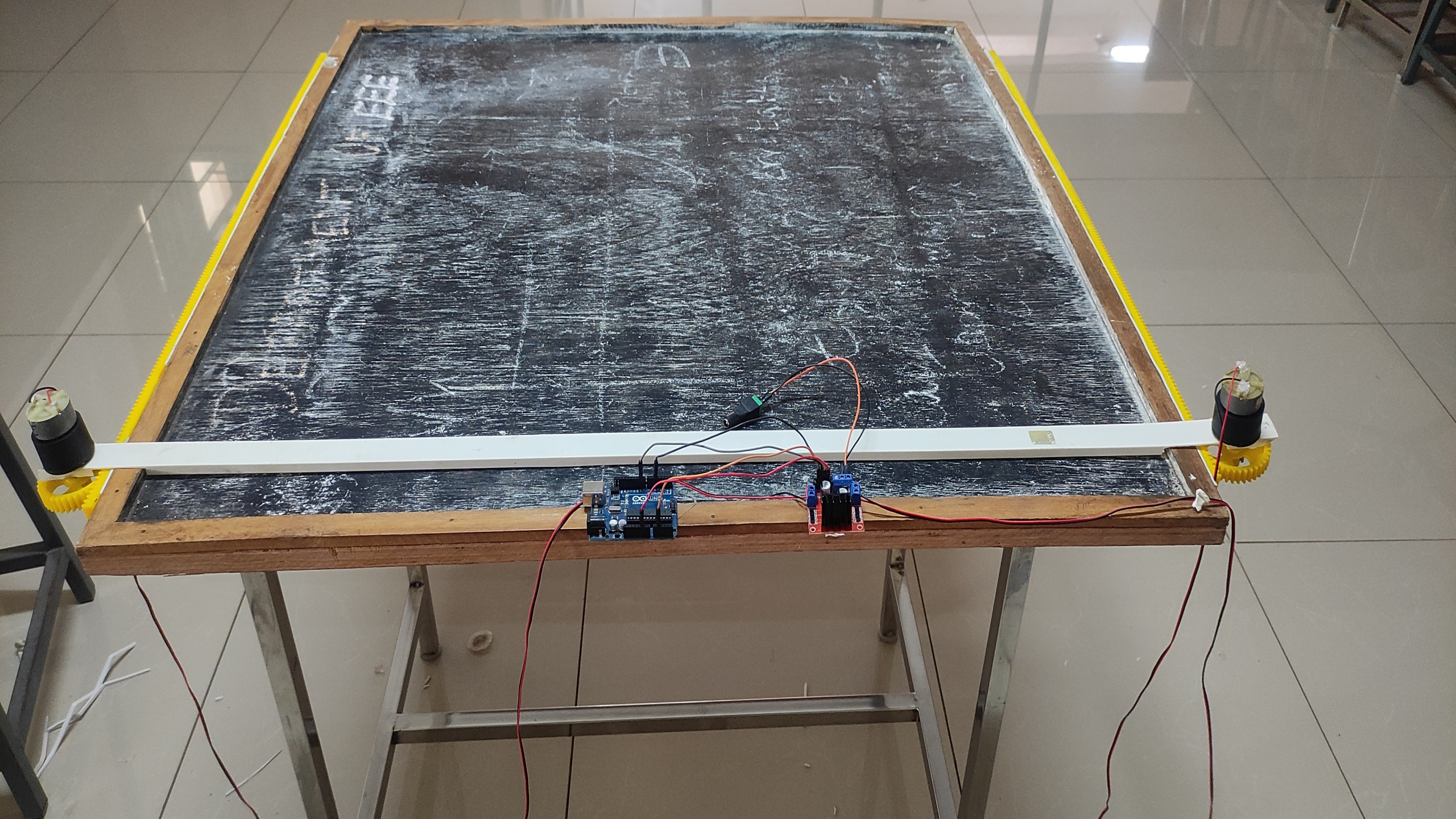
General Library

View

Department Library

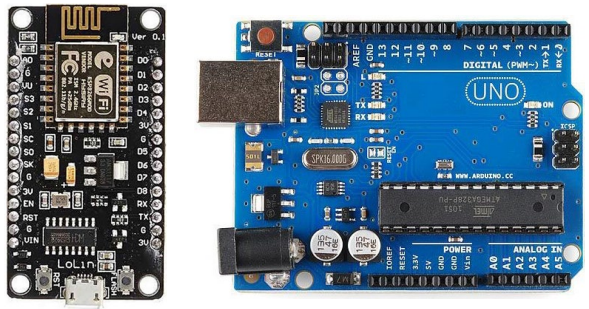
View


RICH DAD POOR DAD
ROBERT T. KIYOSAKI
The Psychology of Money
TIMELESS LESSONS ON WEALTH, GREED, AND HAPPINESS
MORGAN HOUSEL
The Simple Path to Wealth
JL COLLINS
Yuval Noah Harari
Sapiens
A Brief History of Humankind
LIFE'S AMAZING SECRETS
GAUR GOPAL DAS
THINK LIKE A MONK
JAY SHETTY
Tiny Changes, Remarkable Results
Atomic Habits
James Clear
SUPER THINKING
THE BIG BOOK OF MENTAL MODELS
GABRIEL WEINBERG AND LAUREN McCANN
THE SUBTLE ART OF NOT GIVING A F*CK
A COUNTERINTUITIVE APPROACH TO LIVING A GOOD LIFE
MARK MANSON
Steve Jobs by Walter Isaacson
THE AGE OF SURVEILLANCE CAPITALISM
THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER
SHOSHANA ZUBOFF
THE SOUL OF A NEW MACHINE
TRACY KIDDER
SACHIN TENDULKAR
Playing It My Way
OFFICIAL AUTOBIOGRAPHY
WINGS OF FIRE
MESSI
LUCA CAIOLI

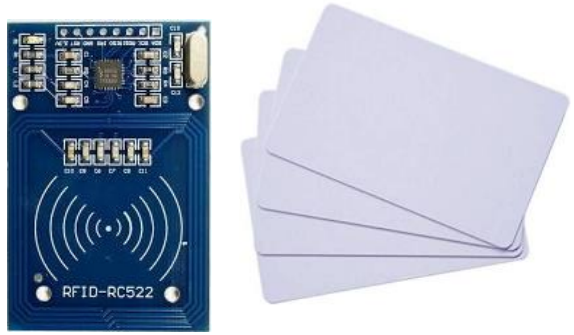


SUN DELUXE

HARDWARE USED FOR THIS SYSTEM

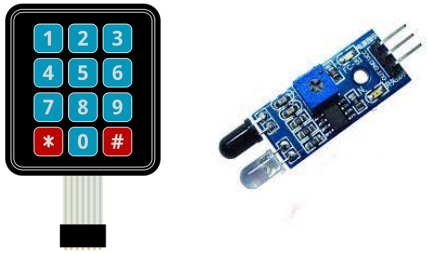


NODEMCU & ARDUINO UNO R3

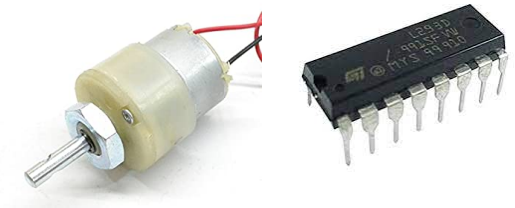


RFID RS232 MODULE & CARDS

CONNECTORS



KEYPAD & IR SENSOR



12V DC GEAR MOTOR & L293D

WEBCAM (720P HD 1280X&20)

SOFTWARE USED FOR THIS SYSTEM

ARDUINO IDE – CODE EDITOR	TINKERCAD – CIRCUIT	WEB3 – WEBSITES

LANGUAGE USED FOR WEBSITES

HTML – STRUCTURE	CSS - STYLE	JAVASCRIPT - BEHAVIOR
PHP – EDITING	APACHE – SERVER	MYSQL - DATABASE

TOOLS USED FOR WEBSITES

VS CODE – CODE EDITOR	GITHUB – HOSTING	NETLIFY – DOMAIN

WEB TECH

- Main Website
- Mask Detection
- Emotion Detection
- Attendance System
- Library Management System

PUBLISHED PAPERS

JAYALAKSHMI INSTITUTE OF TECHNOLOGY

(APPROVED BY AICTE,NEW DELHI ANNA UNIVERSITY, CHENNAI)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINERRING

TECHNOKRATZ-2K21

CERTIFICATE of MERIT

This Is To Certify That Mr / Ms **PRAKASH R**
From **K RAMAKRISHNAN COLLEGE OF TECHNOLOGY** Has
Secured **1ST PRIZE** In The Event Of **PAPER PRESENTATION - IOT BASSED SMART CLASSROOM**
In The 10th National Level Technical Symposium"**TECHNOKRATZ-2K21**"
Held On 3rd May 2021.

CO-ORDINATOR HEAD OF DEPARTMENT PRINCIPAL

PUBLISHED PAPERS

NATIONAL LEVEL VIRTUAL TECHNICAL SYMPOSIUM

Techplex '20

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This is to certify that Mr./Ms. PRAKASH R

of K Ramakrishnan College of Technology, Samayapuram

has been awarded the *First* prize in the *Paper Presentation*

of ***FAISCA '20***, a National Level Virtual Technical Symposium conducted by the **Department of Electrical and Electronics Engineering** on **29-10-2020.** The title of his/her paper is given below. (applicable for Paper Presentation only)

Bloom Energy

COORDINATOR H.O.D. / EEE PRINCIPAL

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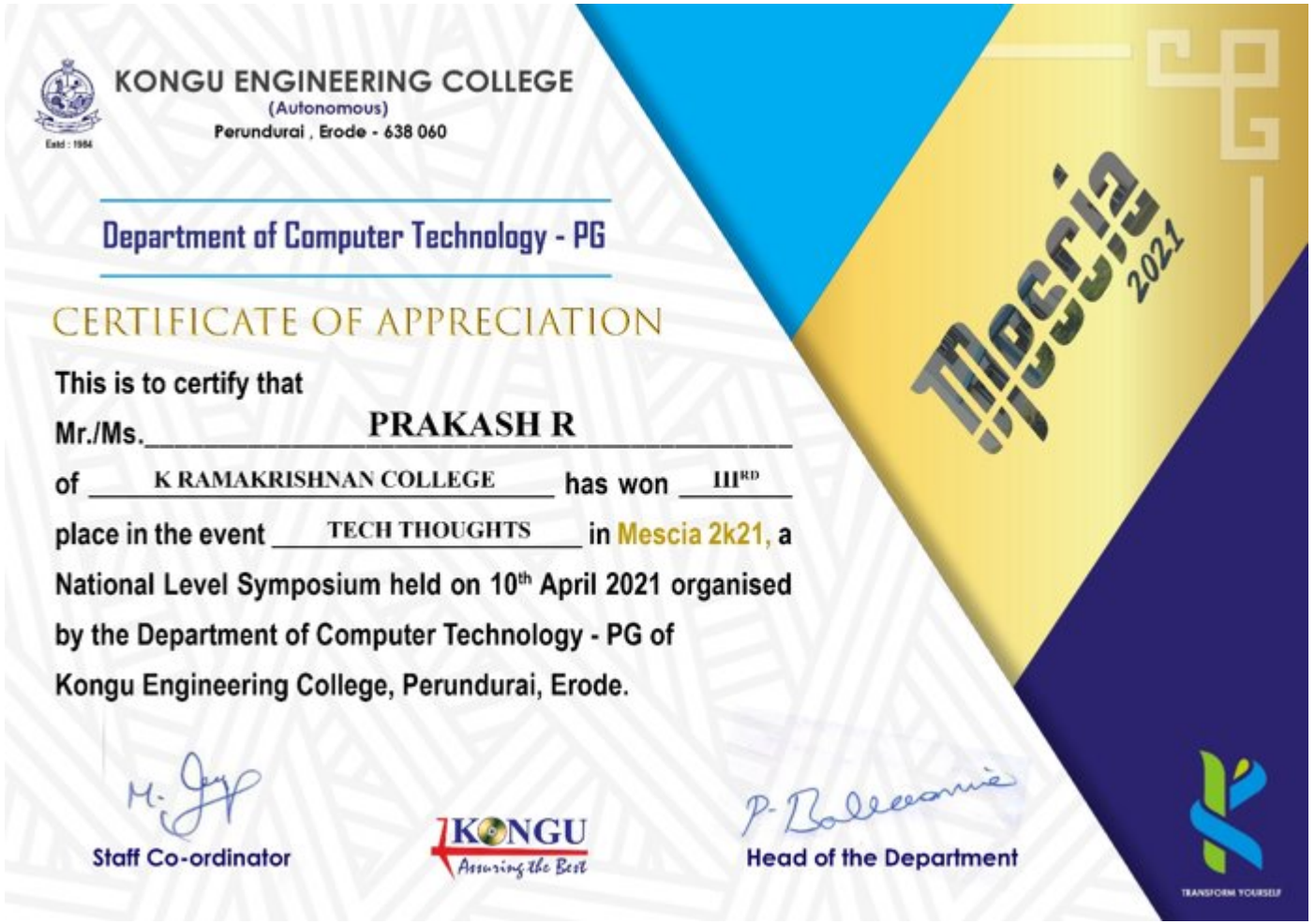
PUBLISHED PAPERS



KONGU ENGINEERING COLLEGE
(Autonomous)
Perundurai , Erode - 638 060
Estd : 1984

Department of Computer Technology - PG

CERTIFICATE OF APPRECIATION

This is to certify that

Mr./Ms. PRAKASH R

of K RAMAKRISHNAN COLLEGE has won III^RD

place in the event TECH THOUGHTS in Mescia 2k21, a

National Level Symposium held on 10th April 2021 organised

by the Department of Computer Technology - PG of

Kongu Engineering College, Perundurai, Erode.

Staff Co-ordinator

KONGU
Assuring the Best

Head of the Department

Mescia 2021

TRANSFORM YOURSELF

PUBLISHED PAPERS

Estd : 1984

KONGU

ENGINEERING COLLEGE

(Autonomous)

Perundurai, Erode - 638 060

Certificate of Participation

This is to certify that

Ms/Mr PRAKASH RAVICHANDRAN has presented a paper at

Zreyas'21,a national level intercollege symposium conducted by the

Gender Equality Club of Kongu Engineering College in the month of

February,2021

Faculty Coordinator

Faculty Coordinator

TIMELINE

2 Days
Domain Choosing

3 Days
Problem Identification

2 Days
Solution Finding

2 Days
Discussion

5 Days
Algorithm Making

2 Days
Hardware

5 Days
Circuit Connection

15 Days
Software Part

4 Days
Testing

2 Days
Error Clearing

10 Days
Bug Fixing

2 Days
Real-Time Use

REFERENCE

1. Abhishek N Vaghela,Bhavin D Gajjar,Subhash J Patel.” Automatic switch using PIR sensor”, in 2017 International Journal of Engineering and Research| Volume 5, Issue 1 | ISSN: 2321-9939
2. 2. Imam-Ul-Ferdous , A.H.M Fazle Elahi, “Development of an automatic board cleaning system using microcontroller” in International Conference on Mechanical, Industrial and Energy Engineering 2014 26-27 December, 2014
3. 3. S.B.Chaudhari, Saurabh Khulpe, Pratik Patki, Kaustubh Kale , Dinesh Malage, “ Classroom automation using voice commands”, International Journal of Advance Engineering and Research Development, Volume 3, Issue 3, March -2016
4. 4. Asit Baran Chanda, “Hardware of electronic notice board”, International Journal of Engineering and Research| Volume 5, Issue 1 | ISSN: 2321-9939
5. Karthik Krishnamurthi, S. Irudaya Mary, B. N. Sumalatha, Adler Pereira, “Fringerprint based attendance system”, International Journal of Advanced Research in Computer andCommunication Engineering, Vol. 4, Issue 3, March

ANNA UNIVERSITY
PROGRESS THROUGH KNOWLEDGE

K.RAMAKRISHNAN COLLEGE OF TECHNOLOGY
TIRUCHIRAPPALLI
CREATE COMPETE CONQUER

THANK YOU !