

FACE MASK AND TEMPERATURE DETECTION BASED GATE OPEN WITH EMAIL NOTIFICATION

AIM:

Design and Development of Face mask and temperature detection based Gate Open with Email notification.

PURPOSE:

Face mask detection system is commonly used in these recent times. Not only useful for covid situation but also for clinical labs and some manufacturing process. Monitoring of continuous wearing of face mask is difficult through man power. Electronic systems can do this job well. Here we proposed a system that can read face mask status, temperature reading and sends email notification. Users need to update their face mask status through this system for every particular interval of time based on requirement. It sends face mask status photos to email and mails are stored with respective to time.

DESCRIPTION:

ESP32 cam and Arduino connected to each other through serial port. MLX90614 contactless temperature sensor connected to Arduino i2c port. Buzzer and button connected to Arduino digital pins. Servo motor connected to Arduino PWM pin.

WORKING:

User need to press button and show face in front of ESP32 cam. If ESP32 cam can detect face mask and send command to Arduino. If mask detected then Arduino starts scanning temperature. If temperature less than threshold temperature then gate will be Open. Threshold can be set with 10k potentiometer. If Arduino detects no mask wear and high temperature then buzzer will be ON and gate will not open. Also Mask Wear and no wear images will be uploading to Gmail.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Esp32-Cam and Arduino Uno
Motor	:	Servo Motor
Contactless Temp Sensor	:	MLX90614
Potentiometer	:	10K
Buzzer	:	DC 5V
Power Source	:	12v 1 amp Adaptor

SOFTWARE:

Arduino IDE

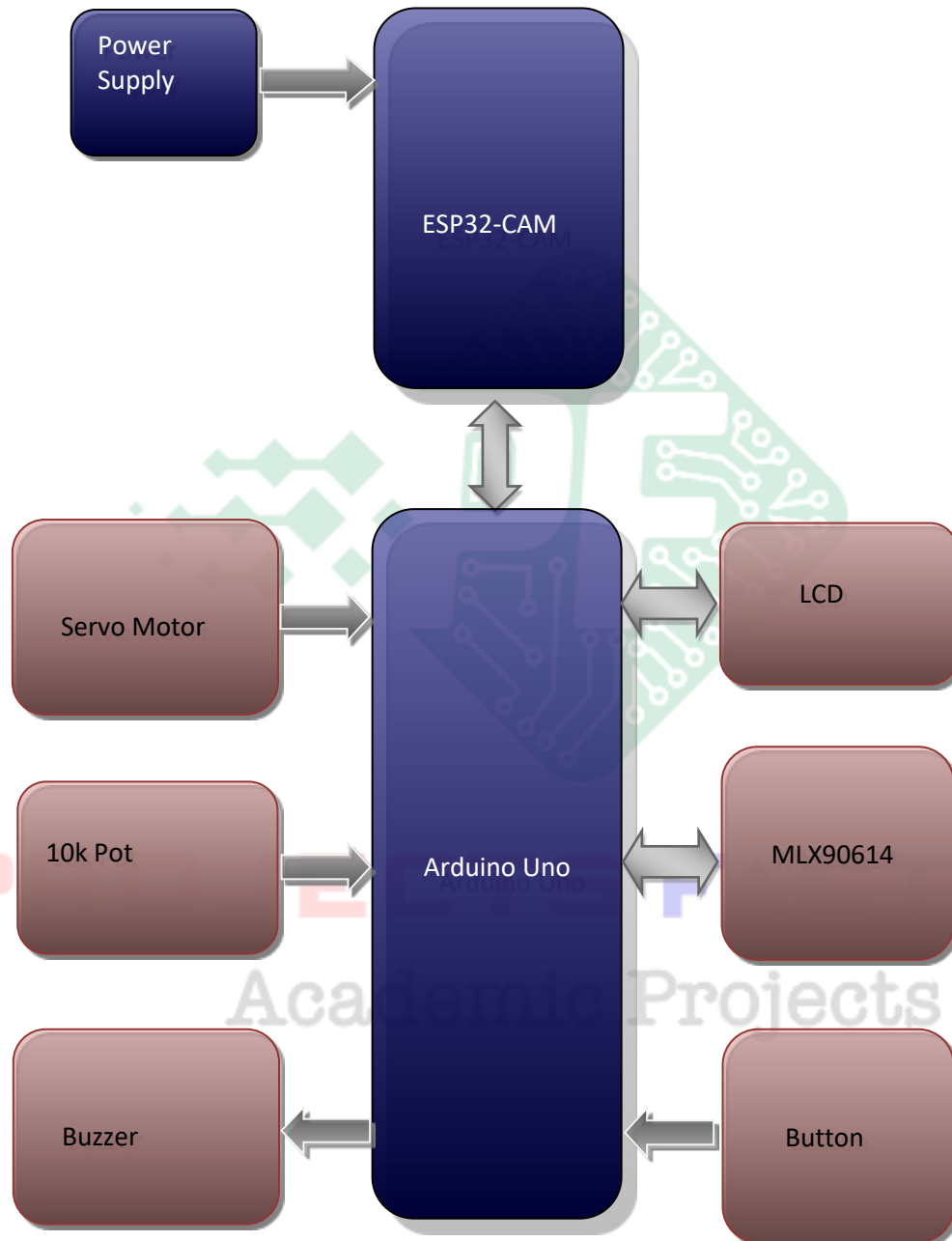
APPLICATIONS:

- Face mask detection
- Notification applications
- Email alerting systems



PROJECTS FACTORY
Academic Projects

BLOCK DIAGRAM:



POWER SUPPLY BLOCK DIAGRAM:



INTERFACES COVERED:

- We have covered Esp32-Cam and Arduino interface
- Face mask detection algorithm
- MLX90614 contactless temperature sensor
- Servo motor interface

PROJECTS FACTORY
Academic Projects