

## FACE MASK DETECTION WITH VOICE ALERT

### AIM:

Design and Development of Face mask detection with voice alert.

### PURPOSE:

Face mask detection systems are need in this Covid-19 pandemic time. Not only for covid-19 but also for clinical laborites and many other medical applications. There are so many designs available with software which is running on PC or laptop. Dedicated pc or laptop required for face mask detection and software running on it. This kind of design is expensive and burden to maintain. Here we proposed new kind of system that can detect face mask and announce through voice. This will be implanting with ESP32-CAM and cheaper than any other designs.

### DESCRIPTION AND WORKING:

Here we used ESP32-CAM and it has built-in camera with WIFI connectivity. It can connect with local network with SSID and password of mobile hotspot or WIFI router. APR33a3 module connected to ESP32-CAM digital pins. Video streaming access done through IP address of ESP32-CAM on local HTML webpage. ESP32-CAM module placed on daughter board and it has 5V DC supply along with all digital pins. Firmware can detect face and face mask. User need to press button while showing face to ESP32-CAM. If face mask detected properly then audio announcement will come through APR module. Otherwise buzzer will ON and alerting audio will come. We can use this kind system in Hospitals, Auditoriums, Covid-19 red zones and clinical laborites.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

Microcontroller	:	Esp32-Cam
Voice Module	:	APR33a3
LED	:	DC 1.8V
Buzzer	:	DC 5V
Power Source	:	12v 1 amp DC battery

### SOFTWARE:

Arduino IDE

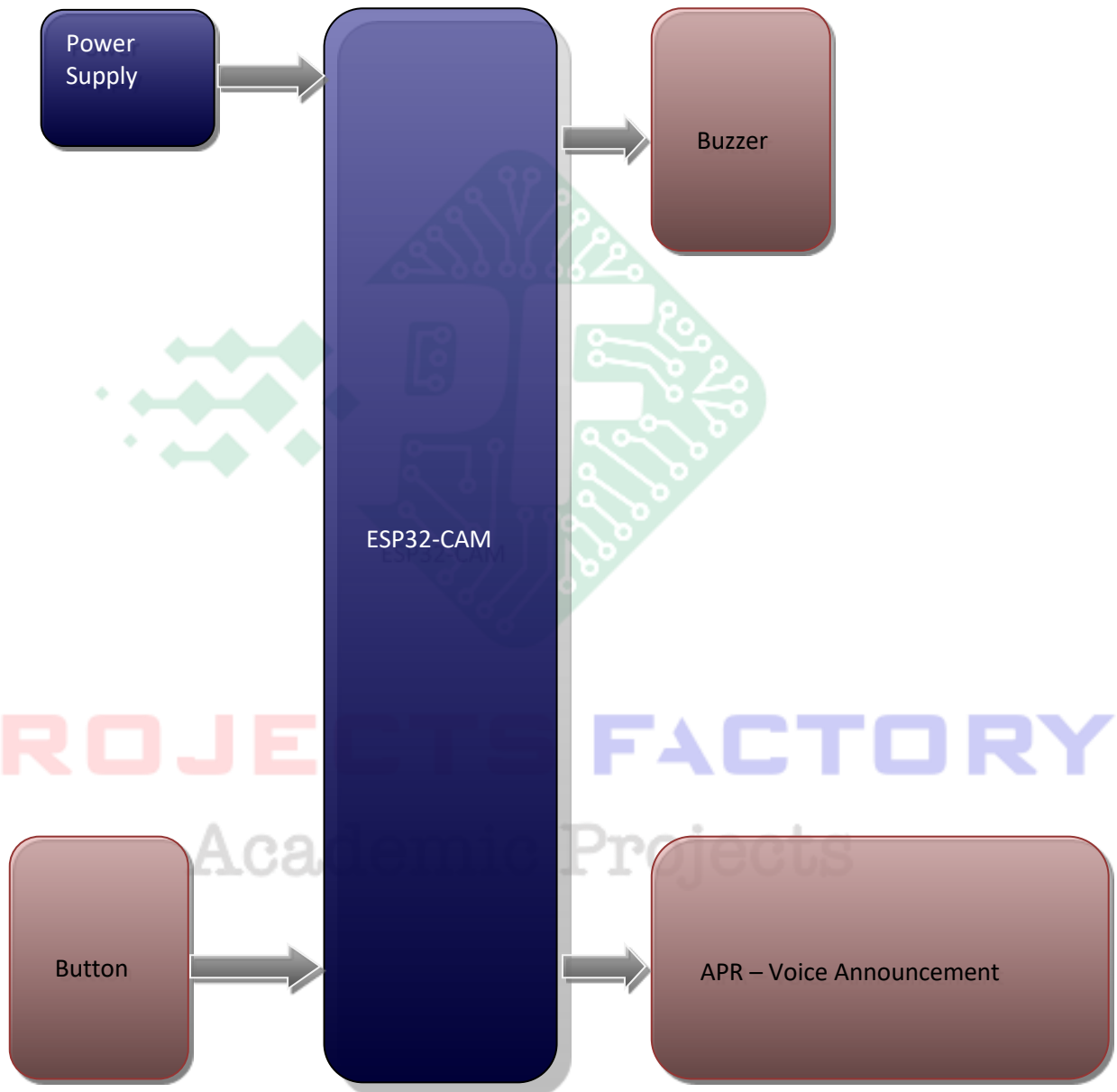
### APPLICATIONS:

- Face mask detection for gate entry
- Covid-19 protocols
- Hospitals
- Clinical laborites



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**BLOCK DIAGRAM:**

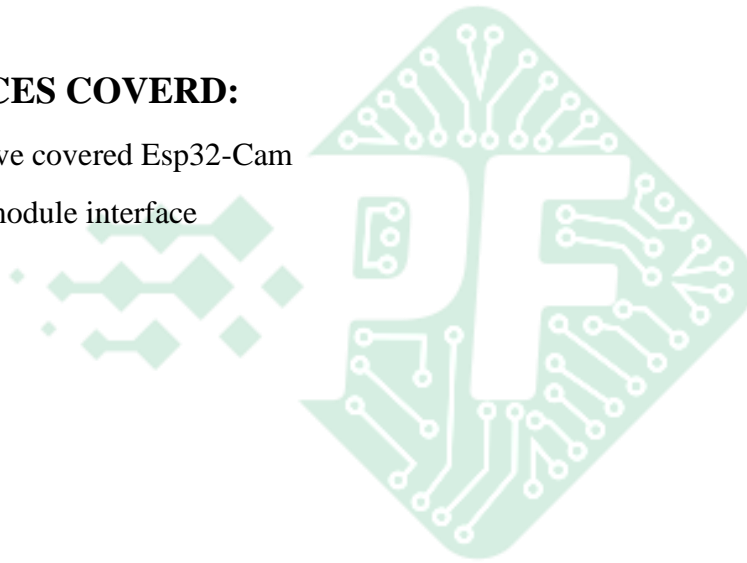


## POWER SUPPLY BLOCKDIAGRAM:



## INTERFACES COVERED:

- We have covered Esp32-Cam
- APR module interface



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