Face Recognition Automatic Door Access Control System.

About This Project:

This project proposes the design of a door security system using camera visualization with the help of Arduino Nano microcontroller. This is Arduino Nano based project puts a safety barrier between a person with ill intentions and us and in the process it also collects evidence as well. The proposed system being controlled by the Arduino Nano has made the project somewhat IoT enabled as it is fully operated through the Internet meaning that our system can be controlled from almost anywhere in the world.

In simple words, how the system operates is that we take power from the main lines and feed it to an SMPS to output a regulated DC voltage that is to be used to run the Arduino Nano. ESP32CAM is connected to an online server. ESP32 CAM will be prepared with some recognized face before. When this recognized face will come in front of this door and CAM scene this face then the servo will move and the door will be open.
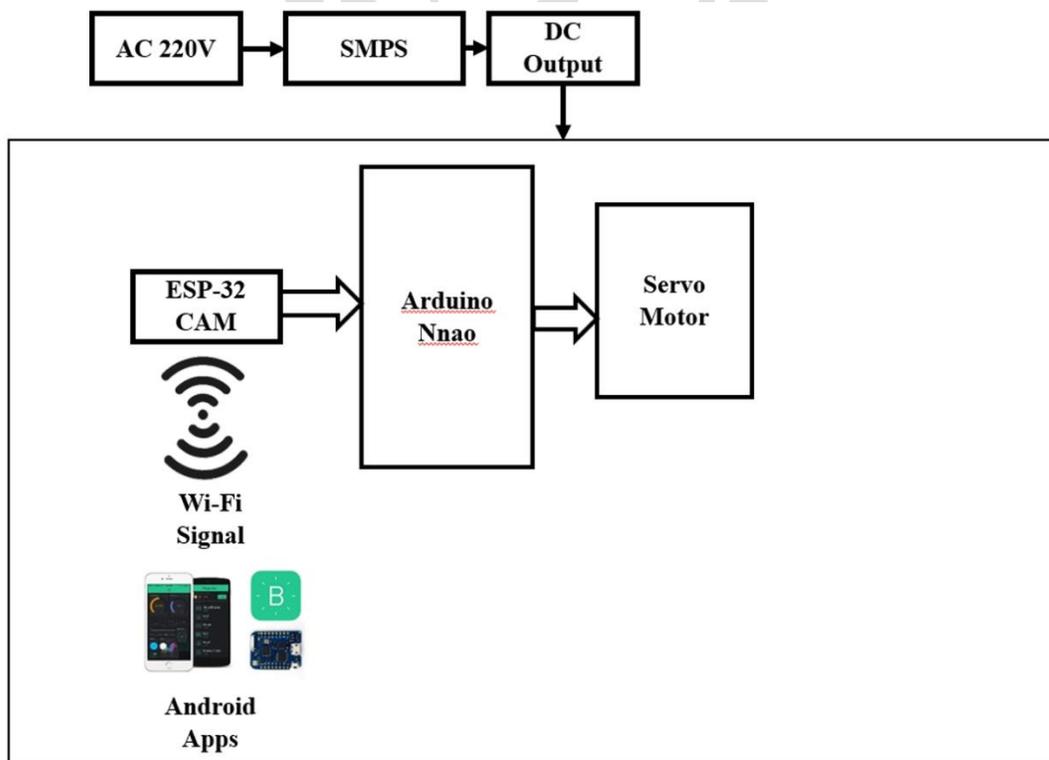
Block Diagram:

Figure: Block Diagram of Face Recognition Automatic Door Access Control System.

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Required Instrument:

- Arduino Nano
- SMPS.
- Servo Motor
- ESP-32 CAM
- 5V Regulator IC
- Transistor

Advantages:

There are many advantages of our project because of its accuracy. Some of the advantages are pointed out below:

- This project is easy to use
- Cost effective
- No foul play takes place
- User-friendly
- Automatic and requires less human interaction
- People with physical disabilities can use this system with ease
- Can be operated virtually from anywhere in the world

Applications:

The application areas for this project in this modern and practical world are huge and some of these are given below:

- It can be used in any educational institutions

- It can be used in any industry or corporate offices

- It can be used in Hospitals

- It can be used to identify authentic or fake person

- It can be used to collect evidences against people with bad intensions

- It can be used in residential areas

N.B: *Any modification of this project can be done as per your requirement. We will make the project according to your needs. Contact us with your any innovative engineering projects idea. We will help you to implement your project.*