

INVENTION REPORT

HEAD COUNTER

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INTRODUCTION

In the modern world, People Counting has become an essential factor for enhancing security and effective resource management. This project proposes an automated system that utilizes Face Recognition technology and Internet of Things (IoT) to accurately count individuals entering through a doorway.

The unique feature of this system is its ability to record a Unique Entry for each individual; even if a person enters multiple times throughout the day, they will be counted only once. While conventional IR Sensor-based systems fail to distinguish between different individuals, this system collects data by verifying the identity of each person, ensuring high precision and data integrity.

AIM

to develop an intelligent system that integrates Face Recognition technology with Infrared (IR) Sensors to count the number of individuals entering a specific location.

OBJECTIVES

- Developing a Face Recognition System
- Unique Person Counting
- Real-time Monitoring and Automation
- Detection of Unauthorized Entries

ADVANTAGES

High Accuracy: Unlike conventional sensor systems that might count any moving object (such as a parcel or an animal) as a human, this system specifically recognizes human faces, ensuring high precision in counting.

Elimination of Proxy and Fraud: In RFID card systems, one person can use another's card. However, with Face Recognition, the individual must be physically present, making the collected data highly reliable and fraud-proof.

Contactless and Hygienic: Unlike fingerprint scanners, this system does not require physical contact with any device. This makes it a more hygienic solution, significantly reducing the risk of spreading germs or diseases.

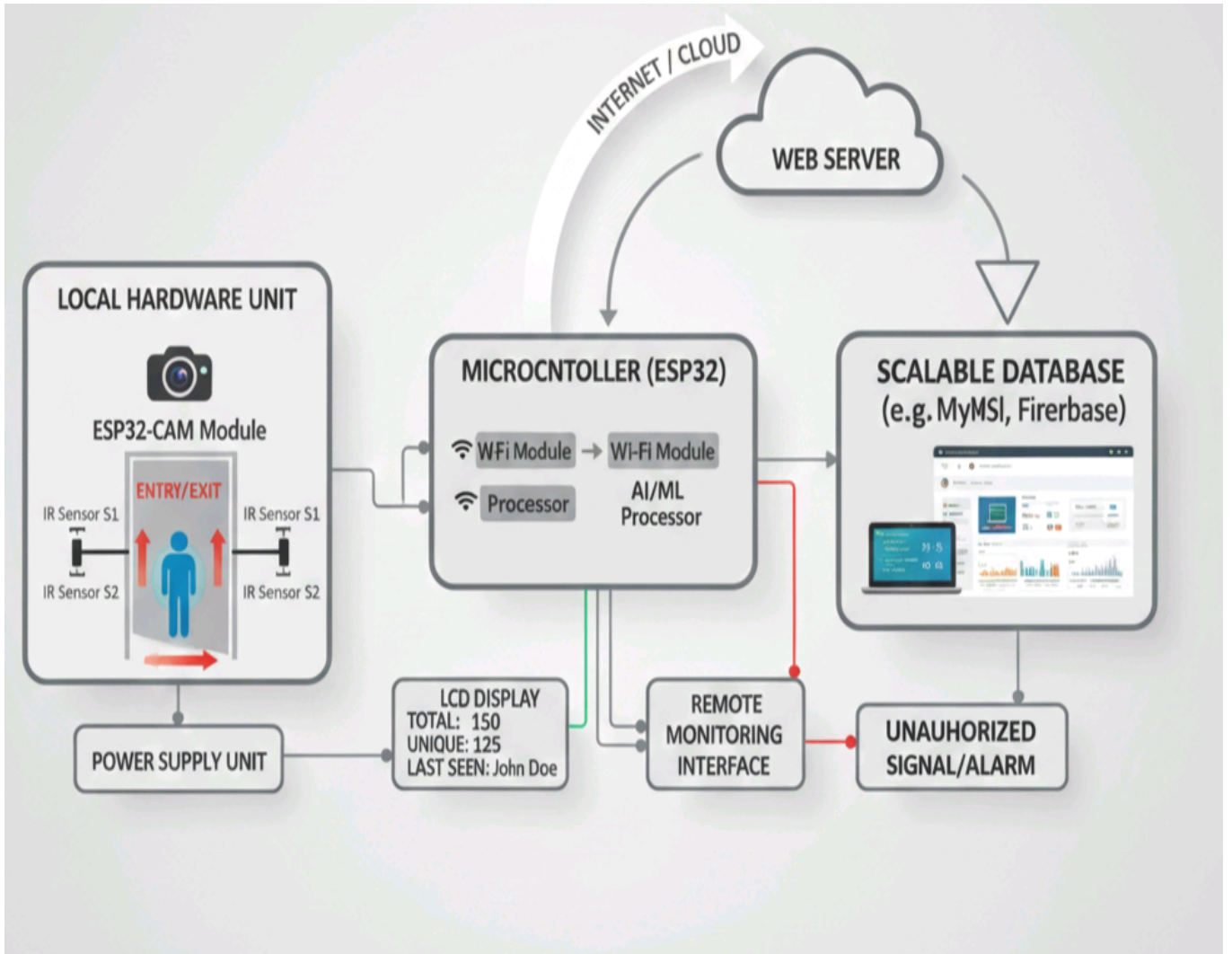
Unique Counting (Redundancy Control): The system ensures that each person is counted only once, regardless of how many times they enter or exit. This is vital for obtaining the actual headcount at events, conferences, and offices.

Scalability: By utilizing an external Database, the system can efficiently manage more individuals without compromising speed or performance.

Convenience and Speed: Users do not need to carry access cards or wait to record their presence manually. Data is logged automatically as they walk through the entrance, ensuring a smooth flow of people.

Enhanced Security: The system can identify unregistered (unauthorized) individuals attempting to enter and can be programmed to trigger an alarm or warning signal immediately.

DIAGRAM



BUDGET REPORT

NO	DESCRIPTION	QTY	PRICE(RS)
1	Arduino UNO	1	1600
2	ESP32 CAM	2	4000
3	FTDI Programmer	1	450
4	IR Sensor	2	300
5	12C LCD Display	1	800
6	5V Power Supply	1	500
7	Bread Bord	2	200
8	Data Cabel	1	600
	Total		8450

Total Budget :- RS:8450

Supervised by :-

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Date

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Signature

