

Smart Campus Security

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Abstract: *Campus gates still use logbooks. Guards sleep, students borrow IDs, "buddy punching" fakes attendance. We built something harder to fool. ESP32 runs it—cheap, connected, enough brain for the job. RFID card plus fingerprint: card proves possession, finger proves identity. Both needed, neither sufficient alone. Servo opens gate, logs timestamp, uploads to cloud. No guard, no paper, no argument. After hours, PIR watches. Motion where none should be—alarm screams, lights flash, alert fires to phone. Intruder startled, security moving, evidence logged. Administrators see everything—who entered when, who failed attempts, where motion detected. Centralized because scattered data useless, automated because humans forget, robust because layered. Cost under ₹4,000. Traditional security expensive, porous, tired. This never sleeps, never borrows ID, never looks away.*

Keywords: Smart Campus, IoT Security, ESP32, RFID Access Control, Biometrics, PIR Sensor, Cloud Logging

