

GIRIDHAR GUGULOTH

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OBJECTIVE

An Embedded Engineer with 2 year of experience. Specialized in C and Embedded C. Adept at identifying opportunities to Enhance Hardware and Software performance for large scale technology implementation.

SKILLS

Languages	: C Programming, Embedded C.
Operating system	: Window, Linux, Rtos.
Microcontrollers	: ESP32.
Protocols	: UART, I2C.
Software	: ESP32 IDF, ARDIUNO IDE.
Modules	: GSM, BLUETOOTH.

EDUCATION

Bachelor of Technology (B.TECH)
Electrical and Electronics Engineering
Malla Reddy Institute of Engineering and Technology, Hyderabad (2018-2022)
CGPA: 6.67.

PROFESSIONAL EXPERIENCE

Designation: Engineer.

Company: GVR Technolabs Pvt Ltd, Hyderabad (Jan-2025 to present).

Project: CCMS (Centralized Control and Monitoring system).

The project aimed to automate and remotely monitor street lighting infrastructure using CCMS (centralized control and monitoring system) boxes integrated with ESP32 microcontroller. The system utilized GSM and Bluetooth communication for data transmission and control. The project enabled remote switching, fault detection, and real-time data display, improving energy efficiency and reducing maintenance overhead.

Roles and responsibility:

- Developed embedded firmware for ESP32 to control and monitor streetlights.
- Developed embedded firmware for PCF8563 RTC module
- Implemented GSM and Bluetooth communication protocols to enable remote control and monitoring of CCMS boxes
- Worked with I2C and UART protocols for interfacing various modules with ESP32
- Tested and validated communication between ESP32 and peripherals module to ensure stable system operation

Project: Real-Time Industrial Process Monitoring & Control using GSM (ESP32).

Technologies: ESP32, GSM Module, SIM800 Sensor (Temperature/Pressure).

Designation:

Designed a real-time industrial automation system using ESP32 microcontroller and GSM technology. The system continuously monitors key process parameters (like temperature, pressure) and sends updates/alerts to remote operator via SMS. It also supports remote command execution to control actuators in plant.

Roles and responsibility:

- Designed system architecture integrating ESP32 with sensor, actuators, and GSM for industrial monitoring
- Developed embedded C firmware for real-time data acquisition, threshold detection, and control logic
- Configure GSM module using AT commands for SMS alerts and remote command execution
- Interfaced and tested temperature, pressure, and flow sensors with ESP32's ADC and GPIOs
- Documentation system setup, code, and deployment steps for field use and maintenance

