SRIDHAR M

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Technical Skills

- Languages : C, C++, Python,HTML(basics)
- Controllers : Arduino,Pic,ESP32&ESP8266
- Kernal :Ubuntu
- Iot protocols :Mqtt(mosquitto,shiftr),GSM, LoRa
- Communication protocol :UART/USART,I2C
- Tools :Mplab,Proteus,Keil Vision,LT Spice,Xlinix,EasyDA

Responsibilities

- Developed and calibrated control algorithms for autonomous systems and integrated hardware components.
- Conducted comprehensive testing, including functional, regression, and performance evaluations, ensuring system reliability.
- Created and managed detailed test scripts, scenarios, and defect reporting processes.
- Documented system design, testing methodologies, and performance results.
- Optimized system performance through iterative testing and refinement.
- Collaborated with cross-functional teams to address and resolve issues efficiently

Education

- **B.E (ECE)**

  2021-2025 with **75 %,** Thanthai Periyar Government Institute of Technology,Vellore, Tamil Nadu, India

- **HSC**

  2020-2021 with **92%** Shri Vidhya Bharathi Higher Secondary School, Namakkal, Tamil Nadu, India

- **S.S.L.C**

  2020 with **88 %**, SPM Higher Secondary School, Namakkal, Tamil Nadu, India

Internships

- **3-month of Intern at Blackfox Embedded Solutions,** Erode - 638001 from **May 2024** to **August 2024**

  As a **Firmware Trainee** Intern at Blackfox Embedded Solutions, I developed and implemented MQTT-based communication modules, integrating GSM functionalities for SMS and call capabilities within IoT devices. I designed protocols for MQTT-GSM synchronization to ensure reliable, real-time data and message updates across devices, while optimizing firmware for smooth, efficient operation. This work included debugging, testing, and documenting project workflows to enhance team knowledge and project continuity

Projects

PROJECT 1:

Title	:	**Bluetooth car with Metal detector**
Year	:	2022
QA Team Size	:	2
Role	:	Hardware and Firware developer
Responsibility	:	Developed Firmware,Metal Detection Integration,Bluetooth Communication,User Interface Development,System Testing and Debugging,Performance Optimization,Documentation and Reporting
System Overview	:	Developed a mobile-controlled Bluetooth car using the Blynk app with an integratedmetal detector for identifying metallic objects. The project combined hardware and firmware development to enable real-time detection and control

PROJECT 2:

Title	:	**Garbage detection and Bin level indication**
Year	:	2023
QA Team Size	:	3
Role	:	Hardware and Firware developer
Responsibility	:	Developed firmware to automate bin operation based on AI classification and monitored bin levels with ESP32, sending data to a web server,conducted iterative testing, identified defects, and logged issues in the bug tracking system during Agile sprints.
System Overview	:	Developed a smart waste management system that classifies waste as biodegradable or non-biodegradable using AI, automatically opening the appropriate bin. The system also monitors bin levels and transmits the data to a web interface using ESP32 for real-time tracking and management

SUB-PROJECT:

Title	:	**Material Positioning using IR sensor**
Year	:	2024
QA Team Size	:	3
Role	:	Hardware and Firmware developer
Responsibility	:	Developed and calibrated IR sensor and motor control code, and integrated ESP32 for real-time web display of object positioning.
System Overview		The system uses two IR sensors to detect an object's presence and position. An ESP32 processes this data to control a motor, ensuring accurate placement of the object. Additionally, the ESP32 displays real-time positioning information, confirming the object's placement and enhancing monitoring and control.

PROJECT 3:

Title	:	**Autonomous Robot with Handshake, Object Avoidance, and Event Display**
Year	:	2024
QA Team Size	:	5
Role	:	Hardware and Firmware developer
Responsibility	:	Developed and tested autonomous robot functions, including gesture-based handshake, object avoidance, with ongoing defect classification and reporting
System Overview		The system features an autonomous robot controlled by Arduino for gesture-based interactions and object avoidance using ultrasonic sensors. Events and status updates are displayed in real-time on a Raspberry Pi, providing a comprehensive interface for monitoring and control.

Personal Profile

Date of Birth	:	29 Dec 2003
Languages Known	:	English , Tamil.
Nationality	:	Indian
Permanent Address	:	Namakkal, Tamil Nadu, India

Declaration

I hereby declare that the information stated above is true to the best of my knowledge as of the stated date, and may be subject to change based on newly discovered information or the execution of other projects.

Place: Namakkal, Tamil Nadu, India
Date: