SRIDHAR M

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Github:https://github.com/sridhar1229

Technical skills

Languages : C, C++, Python,HTML(basics),Verilog

Controllers: Arduino,Pic,ESP32&ESP8266

Kernal: Ubuntu

Iot protocols: Mqtt(mosquitto,shiftr),GSM, LoRa

Communication protocol :UART/USART,I2C

Tools

Software Tools : Mplab,Keil Vision.

Simulation Tools: LT Spice, Xlinix,EasyDA,Proteus

Responsibilities

Developed and Calibrated Autonomous Control Systems: Engineered control algorithms and integrated 15+ hardware components, achieving a 25% improvement in system efficiency through precise calibration

Led Comprehensive Testing and Optimization: Spearheaded functional, regression, and performance testing, enhancing system reliability by 30% and reducing testing time by 20% through optimized testing workflows

Collaborated for Efficient Issue Resolution: Collaborated with cross-functional teams to resolve 40+ system issues, maintaining rigorous records and achieving a 95% on-time resolution rate

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

Firmware Trainee Intern
Blackfox Embedded Solutions, Erode
May 2024 - August 2024

- Designed and implemented MQTT-based communication modules with GSM integration, achieving a 40% improvement in data transmission reliability for IoT devices.
- Improved firmware to reduce latency by 25% in real-time data updates, enhancing system responsiveness for critical embedded applications.

Projects

1. Bluetooth Car with Metal Detector

Year: 2022

- Created a mobile-controlled car with metal detection, reaching 85% accuracy and cutting response time by 15% through Blynk-enabled connectivity.
- Led firmware initiatives, streamlined Bluetooth communication, and developed a user-friendly interface, resulting in a 20% response time reduction. Performed comprehensive testing and fine-tuned system performance to boost device responsiveness by 30%.

2. Garbage Detection and Bin Level Indication

Year: 2023

- Built an AI-enabled waste management system with ESP32, achieving 90% waste classification accuracy and automating 40% of sorting tasks through real-time bin monitoring.
- Monitored bin levels with ESP32, sending real-time data to a web server.

3. Material Positioning using IR SensorYear: 2024

- Enhanced object positioning by 30% through precise IR sensor calibration and ESP32 integration for live data streaming, reducing processing delays by 20%.
- Integrated ESP32 for real-time monitoring and control.

4. Autonomous Robot with Handshake,Object Avoidance, and Event Display

Year: 2024

- Constructed an autonomous robot featuring 95% gesture recognition accuracy and robust object avoidance, enhancing navigation speed by 25%. Devised a real-time event display using Raspberry Pi, boosting data refresh rates by 25% for continuous updates and smoother user interactions.
- Engineered a real-time event display system using a Raspberry Pi, optimizing data processing for a 25% faster refresh rate. Integrated sensors and display protocols to ensure seamless real-time updates and enhance user interaction