SREENATH GOVINDAN

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Professional Summary

Experienced Embedded System Engineer specializing in system design, product development, and hardware-level debugging. Proactive and passionate about continuous improvements in embedded systems projects. Skilled in board bring-up, firmware development, and chip architecture comprehension. Proficient in communication protocols including SPI, I2C, UART, USART, CAN, RS232, IP, and Ethernet. Knowledgeable in task scheduling, timers, semaphores, and mutexes using RTOS.

Work Experience

Embedded System Engineer
Evolve Robotics, Ernakulam
April 2024 – Present

- Designed and developed embedded hardware and software solutions for AI-based systems.
- Contributed to the development of AI and ML-enabled robotics platforms.
- Collaborated with AI engineers and embedded engineers to ensure seamless learning and integration of software and hardware components.
- Participated in system design, idea sharing, firmware development, and hardware/software-level debugging.
- Actively involved in the continuous improvement of product development processes.

Skills

- **Programming Languages:** C / C++, Embedded C, Python
- **Controllers and Processors:** LPC2138 (ARM7TDMI-S), STM32F407VGT6, STM32F103C8T6 (ARM Cortex-M4), PIC16F877A, ATmega328P (8-bit AVR microcontroller), Intel 8051 (8-bit microcontroller), Intel 8085 (8-bit microprocessor), Raspberry Pi (Broadcom BCM2711, Quad core Cortex-A72 - ARM v8), NodeMCU (ESP8266, ESP32-WROOM)
- **Development Tools:** STM32CubeIDE, Arduino IDE, Python IDE - Thonny, PyCharm, Visual Studio Code, MPLAB X IDE, MPLAB PICkit 3, Keil µVision IDE, Altium Designer
- **Protocols:** SPI, I2C, UART, USART, CAN, RS232, IP, Ethernet
- **IoT Platforms:** Adafruit, Blynk, RemoteXY, ThingSpeak

Education

MSc Electronics
College of Applied Science, Vadakkencherry, Calicut University
2021 – 2023

BSc Electronics
College of Applied Science, Kottayi, Calicut University
2018 – 2021

Higher Secondary Examination
G.H.S.S Erimayur, Board of Higher Secondary Examination
2016 – 2018

SSLC
G.H.S.S Erimayur, Kerala State Board
2016

Courses

Embedded Systems
Evolve Robotics LLP

Java
NPTEL

Diploma in Graphic Designing
IMAC College, Computer Education Division

Embedded C Programming
Pantech.AI

Projects

Autonomous Pothole Avoidance System

- Enhanced driving safety by detecting and avoiding potholes using Raspberry Pi and OpenCV.
- Utilized STM32 microcontrollers for precise vehicle control, minimizing accidents and road damage.

Interactive Robot using OpenCV and OpenAI

- Developed an interactive robot with computer vision and NLP capabilities to understand and respond to human commands.

Semi-Automated IoT-Enhanced Aquatic Weed Collecting Boat
MSc Project - 2023

- Designed a semi-automated boat for aquatic weed management and sustainable fish food production using IoT integration.

Social Distance Reminder Badge
BSc Project - 2021
- Created a system using Node MCU for managing social distancing, enhancing safety measures in public spaces.

Mini Projects

- Voice Controlled Home Automation
- Automatic Street Lights
- Vending Machine
- Obstacle Avoiding Rover
- Wi-Fi/Bluetooth Controlled Car
- Line Following Rover
- Drowsiness Detection
- Medicine Support Robot
- Digital Locker

Languages

- **Malayalam:** Read, Write, Speak
- **English:** Read, Write, Speak
- **Hindi:** Read, Write, Speak
- **Tamil:** Speak