CHANDRASHEKHAR YARAGAMBALIMATH

Embedded Software Engineer

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SUMMARY

Embedded Software Engineer with 2+ years of experience in Embedded Linux platforms (Jetson Nano), STM32 firmware, low-level driver integration and real-time robotics systems. Skilled in C, UART/SPI/I2C driver development, bootloader workflows, hardware bring-up and system debugging. Proven ownership in delivering production-grade embedded systems and leading cross-functional teams.

CORE SKILLS

• Device Drivers (GPIO/I2C/SPI/UART) • STM32 Firmware • FreeRTOS • C & Embedded C • Cross-Compilation • System Debugging • Jetson Nano • Hardware-Software Integration

EXPERIENCE

Embedded Software Engineer | JyoSH AI Solutions Pvt Ltd | Jun 2023 – Present

• Developed STM32 firmware in C, implementing UART, SPI, I2C, PWM drivers and real-time control modules.

• Integrated STM32 control firmware with Linux-based Jetson Nano, enabling deterministic robot motion and sensor processing.

• Performed board bring-up tasks including peripheral validation, GPIO mapping and serial driver configuration.

• Designed modular embedded architecture to support robot vision + actuation sync.

• Led a 5-member embedded integration team; drove firmware roadmaps, reviews, and hardware–software validation.

Internet of Things Intern | Emertxe Information Technologies | Mar 2023 – May 2023

• Built IoT automation prototype using Arduino, Blynk Cloud, sensors and actuators.

• Simulated deterministic real-time firmware behavior using PICSimLab.

• Authored embedded design and testing documentation for reproducibility.

KEY PROJECTS

Linux-Integrated Robotic Controller (Jetson Nano + STM32)

• Developed MCU drivers and Linux communication layer for precise robotic motion.

• Worked with system services, serial drivers, GPIO interfaces, and deployment on ARM Linux.

IoT-Based Home Automation System

• Built cloud-connected automation for temperature and water-level control with reliable telemetry.

Automatic Skin Disease Detection Device (Academic)

• Led team developing real-time CNN-based skin disease classifier on Raspberry Pi.

ACHIEVEMENTS

• 1st Place – International Agriculture Hackathon 2025 (Team Award).

• Represented JyoSH AI at Startup Mahakumbh 2025 (deep-tech robotics demo).

EDUCATION

Bachelor of Engineering, Electronics & Communication | Jain College of Engineering | 2023