

NIRANJAN NURUKURTHI

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CAREER OBJECTIVE

Computer Science graduate with training in Embedded Systems, C, Embedded C, Linux system programming and communication protocols such as UART, SPI, I2C and CAN. Seeking an opportunity to apply technical and problem-solving skills in embedded software development and contribute to organizational growth through continuous learning and innovation.

SKILLS

Languages: C, Embedded C.

Operating Systems: Linux.

Tools: Keil IDE, VSCode.

Microcontroller: LPC2129

Communication Protocols: UART, SPI, I2C, CAN.

PROJECTS

Automotive ECU Communication System Using CAN Protocol

- Implemented real-time data exchange between ECUs using the CAN protocol.
- Developed Embedded C firmware using Keil IDE for CAN message transmission and reception.
- Integrated the LPC2129 microcontroller with a CAN controller and transceiver for hardware level communication.
- Utilized interrupt-based message handling to improve system responsiveness and efficiency.
- Analyzed CAN message structures including arbitration and error detection mechanisms.
- Validated system reliability through multi-node testing with error-free data transmission.

SPI-Based Multi-Sensor Monitoring System

- Interfaced an external ADC with LPC2129 microcontroller using SPI protocol for multi-sensor data acquisition.
- Developed Embedded C firmware to read analog sensor data through the external ADC and process sensor inputs.
- Displayed real-time sensor values on an LCD display and validated SPI communication for reliable data transfer.

Inter-Process Communication Framework (Linux)

- Designed and implemented a Linux IPC framework to enable efficient communication and synchronization between multiple processes.
- Applied IPC concepts such as pipes, message queues, shared memory, and semaphores in different modules to understand process communication.

PROFESSIONAL TRAINING

Vector India, Bangalore | Aug 2025

- Completed intensive training in C, Embedded C and Linux system programming with a focus on microcontroller-based system design.
- Gained hands-on experience with industry-standard communication protocols: UART, SPI, I2C and CAN.

EDUCATION QUALIFICATION

Aditya College of Engineering and Technology, Surampalem

B.Tech in Computer Science Engineering | 2024 | GPA: 5.79

Kakinada Institute of Engineering and Technology 2, Korangi

Diploma in Electrical and Electronics Engineering | 2020 | 65.94%

Little Buds School, Kakinada

SSC | 2016 | GPA: 8.8