

SOUDAM BHANU PRAKASH

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Summary

Junior Embedded Engineer with expertise in designing and integrating software for embedded systems. Proficient in firmware coding, debugging, and C/C++ programming, with solid understanding of microcontroller architectures. Developed efficient code for real-time systems, enhancing overall system performance through innovative design solutions.

Technical Skills

- C and C++ programming
- Embedded systems development
- Data structures and algorithms
- Python programming
- Linux operating system
- Microcontroller programming (LPC2129, STM32, ESP32, 8051)
- UART, SPI, and I2C communication protocols
- CAN bus protocol
- GPIO management
- Timer and counter functionality
- ADC and PWM control
- Real-time clock integration
- Sensor interfacing (ultrasonic and temperature)

Experience

10/2024 - 05/2025	Junior Embedded Engineer <ul style="list-style-type: none">• Implemented real-time data logger project for STM32 microcontroller using UART, SPI, I2C, and CAN protocols.• Executed functionality testing to ensure compliance with performance standards.• Analyzed charger parameters including voltage, current, and power to assess behavior.• Evaluated communication between charger and BMS utilizing tools such as BUS Master and PCAN View.• Measured charging speeds and load variations to assess efficiency metrics.• Validated voltage and current output accuracy against design specifications.• Gained hands-on experience with Embedded C, UART, SPI, I2C, CAN, RTC, and Timers/Counters.• Acquired practical knowledge working with LPC2129, STM32, and ESP32 microcontrollers.• Familiar with Keil 5, STM32 Cube IDE, GCC, and Arduino IDE.
05/2022 - 09/2023	Project Engineer <ul style="list-style-type: none">• Over one year of experience in PL/SQL database development and production support.• Possessed strong conceptual knowledge of Oracle 11g, SQL, and PL/SQL.• Utilized SQL functions, SET operators, and constraints effectively in projects.• Created tables, views, and indexes using SQL to enhance data organization.• Implemented constraints and joins to ensure data integrity and relationships.• Developed PL/SQL stored procedures, functions, and database triggers.• Handled exceptions proficiently to maintain application stability.• Demonstrated willingness to learn new technologies and adapt to diverse work cultures.

Education and Training



06/2022	B.Tech in ECE
Madanapalle	Aditya College Of Engineering Madanapalle
	Percentage : 74%
05/2018	Intermediate in MPC
Madanapalle	Sri Siddhartha Jr College
	Percentage : 89%
05/2016	SSC
	Vivekananda Municipal High School
	GPA : 9.2

Course and Certification

- Completed advanced embedded systems concepts and techniques through 8-month comprehensive course at VECTOR INDIA, Bangalore, strengthening skills, and acquiring hands-on experience with various microcontrollers.

Languages

Telugu: First Language

English:	C1	Hindi:	B1
			
Advanced (C1)		Intermediate (B1)	

Projects

Title: Performance enhancement of digital circuit using dynamic CMOS logic

Description: Optimized digital circuit's performance, achieving enhanced speed, reduced logic gate count, and lower power consumption through dynamic CMOS logic implementation.

Title: Reverse parking assistance system in car using CAN protocol

Description: Reverse parking assistance system activates when reverse gear engaged. It transmits signal to receiver, which uses HCSR05 ultrasonic sensor to detect obstacles and calculate distances. This information, which is real-time feedback, is then transmitted back to driver, ensuring safe, guided, precise reverse parking experience.

Title: Secure voting system implementation using C programming

Description: Developed secure voting system using C programming, ensuring integrity and confidentiality of voting process. Implemented features include voter registration, candidate registration, voting, and vote counting. Incorporated security measures such as authentication, authorization, data encryption, and vote validation to prevent tampering and ensure accuracy of voting process.

Title: Smart home control system using Bluetooth (HC-05), LPC2129, UART, external interrupts

Description: Designed and developed smart home control system using Bluetooth technology (HC-05) and LPC2129 microcontroller. Implemented system that enables users to control home appliances remotely using Bluetooth-enabled device. Utilized UART communication protocol for seamless data transmission and external interrupts for efficient system operation.

Websites, Portfolios, Profiles

- <https://www.linkedin.com/in/soudam-bhanu-prakash-876993271>