BALANIKHIL C

Karaikudi, Tamil Nadu

Contact

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9384933996

Academics

B.TECH in ECE *2022-2026 BATCH*

CGPA – 7.02/10

Amrita School of Engineering, Amrita Vishwa Vidyapeetham, Coimbatore.

HSC - 81.2% SSLC - 80.5%

Karaikudi Maharishi Vidhya Mandir, Karaikudi

Areas Of Interest

- Internet Of Things (IoT)
- Digital Electronics
- Software Defined Vehicles (SDV)

Tools

- Keil µVision
- Proteus
- Xilinx Vivado

Protocols

- CAN, LIN, I2C, SPI, UART

Hobbies

- Content Creation
- Music

Contributions

- **Volunteer**, *Amritavarsham'70 2023*
- **Hospitality Deputy Head**, *Anokha Amrita's Tech Fest 2024*
- **Member,** *GENESIS'2025*

A Final Year ECE student with strong skills in Embedded Systems and Digital Logic Verification, eager to apply technical knowledge and contribute to engineering a better world by developing smart, safe, and connected solutions for the automotive industry

Skills

- VLSI (VHDL, Verilog)
- C Programming
- Python
- AUTOSAR
- Digital Design

Publication

"*Integration of C-V2X for ADAS Using Sidelink Technology: A Case Study*" - *2025 IEEE ICEES* Analyzed 3GPP C-V2X Sidelink protocols to optimize V2V communication latency for ADAS safety applications, demonstrating emergency response times.

Projects

"S*ecure School Bus: An IoT-Driven Safety and Monitoring System*" - Developed an IoT-driven school bus safety and monitoring system, integrated RFID, Camera module and GPS for real-time tracking, attendance, and enhanced security.

"Stroboscope-Based RPM Meter Without Microcontroller" - Designed an RPM measuring device using 555 timer-based strobe light and logic ICs, without any microcontroller. Enabled RPM detection by synchronizing LED strobe flashes with rotating machinery.

"Active Thermal Management System for Battery" - Developed a safety-critical monitoring system for battery packs using temperature sensors and External Interrupts on an 8051 microcontroller.

"Secure and Efficient LoRa-Based V2V Communication Using a Forest Fire Emergency Response Model" - Developing an internet-independent LoRa-based Vehicle-to-Vehicle (V2V) communication system for reliable emergency messaging in remote and disaster prone areas.

Internship

Bharat Electronics Limited (BEL), Bengaluru – SoC Dept.
May 2025 – June 2025

- Performed RTL Design & Verification in Verilog, ensuring compliance with industrial simulation standards
- Implemented and verified the SHA-256 hashing algorithm using SystemVerilog.