

Yugandhar Anil Narkhede

Embedded Systems Engineer with expertise in C/C++, ARM microcontrollers, and embedded OS (FreeRTOS, Linux). Skilled in SPI, I2C, CAN protocols, and device driver development. Developed a high-accuracy Vehicle Collision Avoidance System using STM32F407. Immediate joiner, ready to drive innovative embedded solutions.

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EDUCATION

SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY, PUNE | CDAC-PUNE

Post Graduate Diploma In Embedded Systems Design - 65

March 2024 - August 2024

Guru Gobind Singh College of Engineering and Research Centre, Nashik

Bachelor of Electrical Engineering - 8.41

August 2018 - August 2022

PROJECTS

Intelligent Vehicle Collision Avoidance System Using CAN Protocol

April 2024 - July 2024

- Developed and deployed a system using ARM STM32F407 microcontroller and ultrasonic sensors for precise obstacle detection, achieving 95% accuracy in distance measurement.
- Optimized collision avoidance algorithm, reducing false positives by 25% and improving response time by 30%, enhancing overall system safety and reliability by 20%.
- Integrated emergency braking functionality with real-time sensor data, improving reaction time by 40% and reducing collision risks by 35%.
- Engineered CAN protocol for efficient, real-time communication between sensors, ensuring seamless system operation.

C Programming: Game Development and System Utilities

August 2024 - Sept 2024

- Developed interactive games and utilities in C, including Number Guessing, Kaun Banega Crorepati, Tic Tac Toe, and Snake Game.
- Built system applications such as a Digital Clock, Calculator, User Management, Bank Management, Progress Bar, and a Sudoku Solver.

SKILLS

- **Languages:** C, C++, basic Python
- **Protocols:** SPI, I2C, CAN
- **Embedded OS:** FreeRTOS, Embedded Linux, task scheduling, IPC
- **DSA:** Arrays, linked lists, stacks, queues, trees, graphs, sorting, searching
- **Machine Learning:** Supervised, unsupervised learning techniques
- **Embedded Development:** Device driver development
- **OOP:** Classes, objects, inheritance, encapsulation, polymorphism

Certificate

Multi-OS Installation Seminar AstroMediComp | February 2025

- **Certified in OS Installation & Virtualization:** Installed 8 operating systems on a single machine, including 6 native installations and 2 virtual machine setups (VirtualBox).
- **Advanced OS Concepts:** Covered BIOS vs. UEFI, MBR & GPT partitioning, boot sectors, GRUB tweaking, chain-loading, disk formatting, and troubleshooting commands.
- **System Optimization:** Focused on system compatibility, installation order, and special OS configurations for improved performance.

Embedded Development Boards

STM32, ESP32, NodeMCU, Arduino, Raspberry Pi