



SHRINIVAS KRISHNAMURTHI KANKI

M.Tech, VLSI and Microelectronics
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Education

Master of Technology (M.Tech), VLSI and Microelectronics

Indian Institute of Technology Tirupati (2023 - 2025)

Bachelor of Technology (B.Tech), Electrical Engineering

Indian Institute of Technology Goa (2017 - 2021)

Areas of Interest

Embedded Systems Developer with expertise in firmware development, device driver development, integration of peripherals and debugging. Proficient with communication protocols like UART, SPI, I2C, CAN, RS232. Skilled in IoT systems design, sensor integration, and developing firmware for BLE, and Wi-Fi. Experienced in PCB design, multi-layer layouts, and ensuring signal integrity.

Experience

Embedded Systems Intern, Zomato IoT Innovation Lab (September 2024 - current)

- Designed and developed an IoT-enabled smart industrial automation system featuring BLE communication, multi-sensor integration, and real-time monitoring using the nRF Connect SDK and Zephyr RTOS.
- Built IoT sensor nodes with ESP32 controllers, implementing BLE-based mobile connectivity and secure authentication mechanisms.
- Proficient in Embedded C, BLE protocols, I2C, UART, and hardware design, including PCB layout and battery management systems.
- Collaborated on the development of safety-critical, connected solutions deployed in real-world delivery operations.
- Passionate about leveraging embedded and IoT technologies to improve safety, efficiency, and user experience in both industrial and consumer domains.

Embedded Developer, SenseGiz Technologies Pvt. Ltd. (Guide: Mr. Kapil Sharma)(June 2022 - November 2022)

- Specialized in developing BLE-based solutions for IoT use cases, with a focus on asset tracking, people tracking, and geofencing applications.
- Core skills include Embedded C, TI-RTOS, BLE protocol stack development, and low-level debugging of system-level issues.
- Designed and implemented standalone embedded devices with robust Bluetooth feature integration tailored for real-world deployment scenarios.

Embedded Systems Engineer, Kanan Park Technologies LLP (Guide: Mr. Dhruv Bhose)(February 2022 - May 2022)

- Experienced in implementing communication protocols including CAN, SPI, I2C, UART, and RS232 for seamless microcontroller-to-sensor communication at the application firmware layer.
- Designed power electronics and motor driver circuits for diverse actuation systems in robotics and automation applications.

- Worked extensively with open-source autopilot platforms such as ArduPilot and Mission Planner, integrating and configuring hardware like Pixhawk4 and ArduCopter for autonomous drones and rovers.

Embedded Firmware & Hardware Intern, Sagar Defense Engineering Pvt. Ltd. (Guide: Mr. Sourabh Patil)(November 2021 - February 2022)

- Developed device drivers for Bare Metal PIC18 microcontrollers, with a focus on I2C-based communication for interfacing sensors including accelerometers, gyroscopes, magnetometers, and temperature sensors.
- Managed end-to-end PCB design and development, ensuring tight integration between hardware and firmware components.
- Contributed to seamless hardware-software co-development for reliable and efficient embedded system performance.

Projects

Design of 256x128 bits SRAM in CADENCE (Guide: Prof. Rajiv Joshi)

- Designed 256x128 SRAM in 45nm technology using 32k 6T SRAM cells, 16 single-stage differential sense amplifiers, and support circuitry including row/column decoders and charge circuits.

Technical Skills

- **Programming Skills:** C, C++, Verilog, SystemVerilog
- **Embedded Systems:** Bare Metal programming, RTOS, Timers, Counters, UART, SPI, I2C, CAN
- **VLSI Design:** RTL Design, Functional Verification, Synthesis, Timing Analysis
- **Analog VLSI:** Current Mirrors, Differential Amplifiers, Operational Amplifiers
- **RF VLSI:** RF Design Principles, Signal Integrity, Impedance Matching
- **Tools & Platforms:** KiCAD, Vscod, Cadence Virtuoso, MATLAB, TCAD, Xilinx Vivado

Relevant Courses

- Embedded Systems, Digital VLSI Design, FPGA Laboratory, Analog VLSI Design, Physics and Modeling of Semiconductor Devices, RF and Mixed-Signal Design, Control Systems, Power Electronics.