

KIRAN KUMAR L P

Fresher

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PROFESSIONAL SUMMARY

Electronics and Communication Engineering graduate with a strong focus on **Embedded Systems** and **VLSI Technologies**. Proficient in **Embedded C**, microcontrollers, digital electronics, and hardware design fundamentals. Possess excellent analytical and problem-solving skills, coupled with a passion for developing innovative electronic solutions. Seeking an entry-level position to enhance expertise and contribute to technology-driven projects.

WORK EXPERIENCES

Embedded Systems Intern | Internship

Feb 2026 - May 2026

VisionAstra EV Academy

On-site • Bengaluru

- Developed firmware for Battery Management Systems (BMS) and motor control by integrating microcontrollers with sensors and communication protocols, contributing to 5+ EV embedded system modules.
- Designed and tested 10+ embedded firmware implementations focused on real-time control, system optimization, and energy efficiency, while performing debugging and performance analysis to improve system reliability.
- Gained hands-on experience with 8+ EV components and automotive safety concepts, strengthening expertise in hardware-software integration and embedded system development.

Technologies / Skills Used : Embedded C, microcontrollers, Python

PROJECTS

Real time EV dashboard and ADAS system | Portfolio

Jun 2026 - Jul 2026

Lead developer

Developed a **Real-Time EV Dashboard** and **ADAS Warning System** using the **STM32 microcontroller** in **PIC SimLab** to monitor **speed, battery percentage, motor temperature, and battery voltage**.

- Implemented **collision, overspeed, and low-battery alerts** using **GPIO, ADC, Timers, and UART** for effective real-time monitoring.
- Proactively enhanced driver safety through alert mechanisms.

Technologies / Tools Used : Embedded C, C program, Microcontroller

Raspberry Pi Real-Time Object Detection System

Project lead

- Engineered an end-to-end **real-time object detection pipeline**, optimized for **embedded edge deployment** on Raspberry Pi 4 with **sub-second inference latency**.
- Demonstrated integration of **AI/ML models** on resource-constrained embedded hardware, enabling real-world edge AI applications.

Technologies / Tools Used : Raspberry Pi 4, AI/ML

Smart Biometric Voting System

Team member

- Designed a fraud-resistant smart voting system using **dual biometric authentication** (fingerprint + facial recognition) with hardware-enforced identity verification.
- Integrated Raspberry Pi with fingerprint module, camera module, and database storage for secure and reliable voter authentication.

Technologies / Tools Used : Raspberry Pi, fingerprint module, camera module

Digital Stopwatch – VHDL FPGA Implementation

Test engineer

- Designed a fully functional digital stopwatch in **VHDL** on **FPGA** with counter logic, start/stop/reset controls, and 7-segment display output using **Xilinx ISE**.
- Demonstrated mastery of hardware description languages and FPGA synthesis workflows for digital system design.

Technologies / Tools Used : VHDL, FPGA, Xilinx ISE

SKILLS

Programming Languages :

Python, Embedded C, Microcontroller C, VHDL, VLSI, C

Soft Skills :

analytical, problem-solving, Leadership, Adaptability, Critical Thinking, Teamwork

Tools & Platforms :

Arduino, ESP32, Raspberry Pi 4, Microcontrollers, Embedded systems, VLSI

Simulation and EDA tools :

Proteus, Cadence Virtuoso, Cadence NC-Launch, MATLAB, Xilinx ISE

Hardware design :

PCB Design, CMOS Circuit Design, VLSI Implementation, Sensor Integration, GPS/GSM Module Interfacing

EDUCATIONS

Bapuji institute of engineering and technology | Davangere

2022 - 2026

BE

CGPA : 7.8

CERTIFICATIONS

Chip Design & FPGA Excellence Program

Jan 2024

EXPOLOG Technologies

Python web development

Sep 2025

ICT academy

Embedded systems development

Jun 2023

Abeyantrix edusoft