

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

Bengaluru

- Developed firmware for **Battery Management Systems (BMS)** and motor control, integrating microcontrollers with sensors and communication protocols, enhancing **1-4 EV embedded system modules**.
- Designed and tested **2-6 embedded firmware implementations** focused on real-time control, system optimization, and energy efficiency; conducted debugging and performance analysis to boost system reliability.
- Acquired hands-on experience with **2-10 EV components** and automotive safety concepts, enriching expertise in hardware-software integration and embedded system development.

Technologies / Skills Used : Embedded C, microcontrollers, Python

PROJECTS

Real time EV dashboard and ADAS system

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 with approximately **70% reliability**.
- Implemented collision, overspeed, and low-battery alerts using GPIO, ADC, Timers, and UART for effective real-time monitoring.
- Enhanced driver safety through proactive 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 program, C++
Soft Skills :	analytical, problem-solving, Leadership, Adaptability, Critical Thinking, Teamwork
Tools & Platforms :	Arduino, ESP32, Raspberry Pi 4, Microcontrollers, Embedded systems, VLSI, Linux, GitHub, STM32
Simulation and EDA tools :	Proteus, Cadence Virtuoso, Cadence NC-Launch, MATLAB, Xilinx ISE, Linux, PIC SimLab
Hardware design :	CMOS Circuit Design, VLSI Implementation, Sensor Integration, GPS/GSM Module Interfacing, PCB Design, Embedded system design

EDUCATIONS

Bapuji institute of engineering and technology Davangere	2022 - 2026
BE - Electronics and communication	CGPA : 7.8

CERTIFICATIONS

Chip Design & FPGA Excellence Program	Jan 2024
EXPOLOG Technologies	
Python Web Development certification conducted by ICT Academy, sponsored by Infosys.	
Python web development	Sep 2025
ICT academy	
Embedded systems development	Jun 2023
Abeyantrix edusoft	
IOT and Cloud analytics	Apr 2025
Stofo technologies	