Sachin R Shenoy

Electronics and Communication Engineering Student
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Professional Summary

Electronics and Communication Engineering student with a CGPA of 9.81, interested in research-oriented project work in digital design, embedded systems, and hardware-centric signal processing. Experienced in Verilog HDL based digital design, embedded system integration, custom PCB design, and supervised academic research.

Education

M. S. Ramaiah University of Applied Sciences — Bengaluru, India
Bachelor of Technology in Electronics and Communication Engineering; CGPA: 9.81 — *2023 – 2027*

Skills Summary

- **HDL & Digital Design:** Verilog HDL, combinational and sequential logic, floating-point arithmetic, modular RTL design
- **Embedded Systems:** ESP32, Arduino, ARM-based microcontrollers, sensor interfacing, real-time systems
- **PCB Design:** EasyEDA, schematic capture, component selection, PCB routing
- **Simulation Tools:** MATLAB, Simulink, Simscape, NI Multisim
- **Programming:** Embedded C, Python (basic)
- **Communication Protocols:** UART, SPI, I2C
- **Soft Skills:** Analytical thinking, problem solving, technical documentation, teamwork, research orientation

Experience

Embedded Systems Engineering Intern — Remote
Skill Ladder — *Aug 2025 – Oct 2025*

- **Embedded Systems**: Developed and integrated sensor-based embedded systems on microcontrollers.
- **Debugging**: Performed testing and debugging of embedded hardware prototypes.

Projects

Floating Point Adder and Subtractor (Verilog HDL): Designed an IEEE-754 compliant floating-point addition and subtraction unit in Verilog HDL, implementing exponent alignment, mantissa operations, normalisation, and rounding logic with emphasis on modular RTL design.

Embedded Automation and Monitoring Systems: Developed multi-sensor embedded systems including LDR-based lighting automation, temperature-controlled fan, and weather and health monitoring systems. Integrated environmental and physiological sensors with microcontrollers for real-time data acquisition and actuator control.

Automated Medicine Dispenser System: Designed a time-based automated medication dispensing system using Arduino Nano, RTC module, servo motors, and audio alerts with safety-oriented scheduling logic.

AI-Based Prosthetic Hand Movement Prediction Using EEG Signals: Ongoing PhD advisor-supervised research project involving EEG signal preprocessing, feature extraction, and evaluation of machine learning models for prosthetic hand movement prediction.

Certifications & Technical Training

- Embedded Systems and IoT – Skill Ladder
- MATLAB, Simulink, Simscape – MathWorks
- NI Multisim Circuit Design – MS Ramaiah University of Applied Sciences
- Raspberry Pi and DSP/FPGA Board Workshop
- Semiconductor Manufacturing Workshop – IISc Pravega
- Robotics and Controls Engineering – Johnson & Johnson (Forage)
- Technology Consulting and Platform Engineering – Deloitte Australia (Forage)