

Abhilash Yerra

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CAREER OBJECTIVE

Highly motivated and detail-oriented Software Development Engineer with strong knowledge of Embedded C, microcontroller programming, and communication protocols. Seeking to contribute to innovative embedded solutions by applying skills in firmware design, debugging, and real-time systems.

EXPERIENCE

- **Embedded Software Engineer Intern**
Autosquad Technology and Services, Patancheru. Sep 2025 – Present
 - Working on real-time embedded applications involving microcontrollers, firmware development, debugging, and hardware integration.
 - Developing and testing embedded C programs for embedded systems and automotive-related applications.
 - Understanding and learning AUTOSAR architecture concepts and Battery Management Systems (BMS).
 - Working with communication protocols such as UART, SPI, and I2C for device interfacing and system communication.
 - Using **logic analyzer** tools for signal monitoring, protocol analysis, and debugging communication issues. Using **oscilloscope** for waveform analysis, signal integrity verification, timing measurement, and hardware troubleshooting.
 - Performing hardware bring-up, board-level testing, and troubleshooting embedded systems.
 - Supporting system integration, testing, and validation activities, collaborating with team members to analyze issues and improve system performance.
- **Tester (Contract)**
Axiom Power Product Pvt. Ltd., Cherlapalli, Hyderabad Jun 2025 – Sep 2025
Worked on Production Department for testing and debugging of electronic products. Performed functional testing, fault analysis, and quality checks on circuits and PCB assemblies. Assisted the production team in identifying defects and ensuring product reliability.

TECHNICAL SKILLS

- **Programming & Languages:** Embedded C, Java
- **Embedded Systems & Microcontrollers:** 8051, STM8, STM32, Bootloaders
- **Protocols & Interfaces:** UART, SPI, I²C, CAN
- **Tools & IDEs:** Keil uVision, STVD, Eclipse, Proteus, Git/GitHub, STM32CubeIDE
- **Electronics & Hardware:** Circuit Simulation Tools, Electronics Testing & Debugging, Component Identification & Selection, Soldering & PCB Assembly
- **Full Stack Development:** HTML, CSS, JavaScript, Bootstrap.
- **General Software:** MS Office

PROJECTS

Remote Patient Monitoring & Controlling using IoT and Mobile Robot

- Developed an IoT-based system for real-time patient health monitoring and mobility support. Interfaced sensors with Raspberry Pi for health data acquisition.
- Used communication protocol (SPI) for sensor and module interfacing. Enabled remote monitoring and robot control through mobile applications.

Line Following Robot

- Developed an autonomous robot using Arduino Uno and IR sensors to detect and follow predefined paths. Implemented motor control algorithms for smooth navigation and optimized sensor calibration for accuracy.

Embedded System Applications

- **Water Vending Machine (STM8 Microcontroller)**
Developed a time-based automated water vending machine using STM8 microcontroller. Integrated coin sensor, LCD display, relay control, Implemented pulse counting, timer control, and user interface without external libraries.

EDUCATION

- BTech in Electronics and Communication Engineering
Anurag Group of Institutions, Hyderabad 2019 – 2022
- Diploma in Electronics and Communication Engineering
GMR Polytechnic, Gajwel 2016 – 2019
- Secondary School Certificate (SSC)
ZPHS Ahmadipur 2011 – 2016

CERFICATIONS

- **Advanced Embedded Technology – Level 6**
Central Institute of Tool Design (MSME – Tool Room, Govt. of India), Hyderabad
Successfully completed a six-month NSQF-compliant Level 6 training program covering Embedded C, microcontrollers, communication protocols (UART, SPI, PC, CAN), debugging, PCB design, and real-time project development.
- **Full-Stack Web Development and Java Training from Skill Konnect**
Completed an industry-oriented training program covering front-end (HTML, CSS, JavaScript), back-end (Java), and database integration. Gained hands-on experience in building and deploying full-stack applications.

SOFT SKILLS

- Passion for embedded systems and innovation
- Team collaboration and leadership abilities
- Strong problem-solving and analytical thinking
- Technical documentation and reporting
- Effective written and verbal communication
- Quick learner and adaptable
- Self-motivated

HOBBIES

- Searching new concept in internet
- Gardening
- Photography
- Tech Blogging & Research
- Travel
- Music and web series

Languages

- English, Telugu, Hindi.