Shrinivas Gururaj Habbu

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Electronics and Communication Engineering graduate with hands-on experience in embedded systems, sensor-based solutions, and real-time applications. Skilled at integrating hardware and software to build practical, innovative solutions. Quick learner and collaborative team player, eager to contribute to cutting-edge electronics and IoT projects while continuously enhancing technical expertise.

PROFESSIONAL EXPERIENCE

Embedded Systems Intern **–** Emertxe **January 2025 – February 2025**

- Developed firmware in MPLAB IDE to simulate a microwave oven on a PIC microcontroller with timing, heating, and user controls.
- Integrated sensors, timers, and user interfaces (keypad, LCD) for real-time hardware-software operation.
- Optimized code to reduce response delays by ~20% and improve system efficiency.
- Performed debugging and testing to enhance firmware reliability for real-time applications.

Frontend Development Intern – IBM (AICTE-SkillsBuild Program) **July 2024 – August 2024**

- Completed a 6-week mentor-led internship focused on frontend development and UI/UX best practices.
- Designed and delivered a responsive web project using HTML, CSS, and JavaScript to enhance user interface skills.
- Applied weekly mentor feedback to iteratively improve project performance and functionality.
- Earned AICTE & Edunet Foundation certification for project excellence.

EDUCATION

BLDEA's V.P.Dr. P G Halakatti College of Engineering & Technology, Vijayapura **2021 – 2025**

B.E. in Electronics and Communication Engineering

CGPA: 6.6

- **Relevant Coursework**:

Digital Logic Design, Microcontrollers, Embedded C Programming, VLSI Design

SKILLS

- **Development Tools & IDEs**: VS Code, MPLAB, Keil uVision, Arduino IDE, Cadence, Proteus
- **Programming Languages**: Java, Python, C.
- **Professional Skills**: Problem Solving, Communication, Teamwork, Adaptability, Self-learner

PROJECTS

EcoVitals – Real-Time Vital Monitoring System *(Final Year Project, 2024–2025)*

- Designed a system with NodeMCU and multiple sensors (DHT11, pulse, gas) to monitor vital signs and environmental data.
- Improved measurement accuracy by **20% compared to manual methods**.
- Enabled continuous real-time tracking and early warning alerts for extreme environments.

Sign Language Detection Using Flex Sensors *(Academic Project, 2024)*

- Created a wearable glove with flex sensors to capture gestures and translate them into text or audio.
- Developed real-time signal processing algorithms to increase **recognition speed and accuracy**.

Microwave Oven Simulation *(Internship Project, Emertxe, 2025)*

- Simulated oven functionality with a PIC microcontroller and developed firmware in MPLAB IDE.
- Implemented **cooking time control, power levels, and sensor-based interfacing**.
- Optimized performance for **stable hardware-software integration**.

COURSES

- **Embedded Systems Design** – *Emertxe* *April 2024*
  Skills: Microcontroller architecture, embedded C, firmware development, sensor interfacing (PIC, ARM), MPLAB, Keil
- **Caree**r **Essentials in Generative AI** – *LinkedIn & Microsoft* *July 2023*
  Skills: Prompt engineering, ChatGPT usage, responsible AI development, generative AI workflows
- **Industrial Internet of Things (IIoT)** – *TATA Elxsi, ISTE & BLDEA* *Dec 2022 – Jan 2023*
  Skills: IoT architecture, industrial sensor networks, MQTT protocols, cloud data monitoring

Extra circular activities

Internshala Student Partner (ISP 37) – Brand Ambassador
Campus Engagement Role

- Represented Internshala on campus by promoting internships and training programs.

- Organized student outreach events to raise awareness about career opportunities.
- Increased sign-ups and earned a **certificate of appreciation** for impact.

Languages

- Kannada (Native)
- English
- Hindi