BAVADHARINI G S

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EDUCATION

Bachelor of Engineering in Mechatronics — **CGPA: 8.67**
Chennai Institute of Technology, Chennai — (2022 – 2026)

Higher Secondary Certificate — **94.6%**
Vani Vidyalaya Senior Secondary and Junior College — (2021 - 2022)

INTERNSHIP EXPERIENCE

Centre for Advanced Industrial Research — **(June 2024)**
Learned about Raspberry Pi & Machine Learning and developed projects including predictive maintenance systems

CDCE Robotics and Automation — **(May 2024)**
Worked on bezel assembly systems, contributing to the design of specific SPM components, developing and simulating PLC programs for SPMs using Delta PLCs, and supporting PLC circuit connections.

WIPRO Infrastructure Engineering — **(Nov – Dec 2023)**
Worked with the Fanuc R-2000iC/165F industrial robot, and engaged in hydraulic cylinder manufacturing processes, including friction and arc welding techniques.

MK Autocomponents — **(May 2023)**
Gained experience with CNC lathes and VMC machines, involving machining processes, quality control procedures, production planning, and optimization.

PROJECTS

WORKPLACE PROJECTS:

Real-Time Parcel Tracking System for United Parcel Service, Inc.

Integrated foam-based RFID tags with standalone Zebra RFID scanners and Raspberry Pi to transmit data to backend servers, and implemented real-time GPS integration with Raspberry Pi for enhanced parcel tracking.

ACADEMIC PROJECTS:

1. **Intelligent Air Care**
   - Built an ESP32-based predictive maintenance system for air conditioners, various sensors. System monitors real-time data, automatically detects anomalies, stores them in the cloud, and triggers notifications for proactive maintenance.
   - **Link:** https://github.com/Bavadharini-G-S/Intelligent-Air-Care
2. **Auth-Enabled Home Automation via Whatsapp**
   - Designed secure home automation with ESP8266 & Whatsapp control (authentication required). Maintains manual control via switches.
   - **Link:** https://github.com/Bavadharini-G-S/Auth-Enabled-Home-Automation
3. **Multi-terrain Autonomous Bot**
   - Built terrain-agnostic autonomous robot using ultrasonic sensors for obstacle detection.
   - **Link:** https://github.com/Bavadharini-G-S/Multi-terrain-autonomous-bot

CERTIFICATIONS

CISCO Networking Essentials
CISCO Introduction to Cybersecurity
CCNAv7 Switching, Routing and Wireless Essentials
Universal Robots e-Series Track Course
Coursera IoT Communications
Coursera IoT Devices
IMTMA Overall Equipment Effectiveness
Linkedin Learning Industrial Automation

SKILLS

- IoT Development
- Arduino Development
- Embedded Systems
- Industrial Robotics
- Sensors & Instrumentation
- C, Python Programming
- PLC Programming
- Solidworks

ACHIEVEMENTS

- Best Design Award – National Level Competition on SAE Embedded Systems, 2024
- 1st Runner-up – Nexathon 2024
- Semi-finalist – Aakruti 2024
- 1st Runner-up – Quest for X Mark (Tech event at Loyola ICAM College)