Aadarsh S U

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EXPERIENCE

Microchip Technology   **On-Site - Chennai, India**
Engineer I - Corporate Applications Engineer   Jul 2024 – Mar 2025

- Worked with clients to deliver critical project tasks across the entire WNET (L1 and L2) product portfolio, consistently meeting deadlines.
- Developed **a Python-based tool using OpenCV** to extract pin names from customer schematics, significantly accelerating design validation and enabling usage across global engineering teams.
- Designed and implemented **a custom network testing tool in Python**, tailored for proprietary hardware platforms. The tool improved test efficiency and reduced manual effort by **30%**.
- Designed and executed **functional and protocol tests** for wired network products with integrated MPUs on Linux, using custom **Python scripts and libraries** to accelerate validation workflows.
- Developed **a multi-screen GUI application (6 screens)** with structured modular design, and packaged it into a standalone executable. Conducted comprehensive testing to ensure seamless functionality and deployment.
- Validated and analyzed the implementation of IEEE protocols such as PTP and ACL on managed Ethernet switches.

Student Intern   **Chennai, India**
Microchip Technology   Jan 2024 - Jun 2024

- Designed and implemented an embedded C solution to enable Ethernet communication on entry-level microcontrollers lacking native Ethernet support, achieving a **25% improvement in data transmission speed** through software optimization.
- **Developed a lightweight software utility** for an **hourly reminder system** with configurable intervals, optimized for low-power operation on resource-constrained embedded platforms, ensuring efficient performance and extended runtime.

Workshop   **Bangalore, India (Sep 2022)**

- Gained hands-on experience with Android development tools and implemented real-time text-to-speech functionality conducted by **IISc Bangalore** to enhance practical knowledge in mobile app development.

EDUCATION

Thiagarajar College of Engineering   **Madurai, India**
Bachelors of Engineering in Electronics and Communication Engineering   Sep 2020 – May 2024
                                                                                                                                                       CGPA 9.61

Vidhya Sagar Global school   **Chengalpattu, India**
12th Grade   June 2019 - March 2020
                                                                                                                                                      Score 92%

PROJECTS

- **Email Automation Script**: Developed a **Python script using Selenium WebDriver** to automate email sending for a college club event, successfully delivering over **500 invitation emails** to participants.
- **Car Showroom Management System:** Developed a desktop-based application with full **CRUD** functionality to manage vehicle inventory, track status updates, and streamline overall showroom operations.
- **Hostel Management System:** Built a web-based student record management system with complete **CRUD** operations, integrating a relational database for efficient data storage, retrieval, and management.
- **Smog Prediction and alerting system:** Executed **end-to-end integration** of a smog detection system using NodeMCU, environmental sensors, and custom PCB for interfacing. Enabled real-time and cloud-based monitoring with ThingSpeak, applying **data analytics** and **predictive modeling (LPC)** for trend analysis. Combined hardware design, real-time data processing, and IoT for smart environmental monitoring.
- **Hobby Projects:**
  - Designed and implemented game logic for Tic-Tac-Toe and Black Jack using **Python**.
  - Implemented web scraping projects using **Python**, leveraging libraries like Requests, BeautifulSoup, and CSV for data extraction and organization.

SKILLS

- **Languages:** Python, PHP, JavaScript, SQL, C
- **Database:** MySQL
- **Version Control:** Git
- **Web Technologies:** HTML, CSS

CERTIFICATIONS

- Elite certification for "The Joy of Computing using Python" awarded by IIT-Madras
- The Complete Python Bootcamp from Zero to hero in Python - Udemy
- The complete 2024 Web Development Bootcamp - Udemy.