Vraj Shah

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Professional Summary

Software Developer with experience in embedded systems, backend development, and API design, with a growing interest in wireless technologies. Proficient in C, Python, and Kotlin, with hands-on experience in software development, debugging, and version control using GitHub. Strong foundation in Agile methodologies and cross-functional collaboration. Passionate about designing efficient, scalable software solutions and troubleshooting complex system-level issues.

Technical Skills

Programming Languages: C, Python, Kotlin, Swift, JavaScript, SQL

Embedded & Systems Programming: C, Memory Management, Low-Level Debugging

Software Development: Multithreading, Performance Optimization, API Design

Version Control: Git, GitHub, GitLab CI/CD

Networking & Protocols: RESTful APIs, TCP/IP

Development Methodologies: Agile, Scrum

Soft skills: Strong communication, Problem solving, Teamwork and collaboration, Adaptability, Attention to detail, Critical thinking, Time management, Ability to learn continuously

Work Experience

Simform Solutions **Dec 2021 - Nov 2023**

Software Engineer *Ahmedabad, India*

- **Designed and optimized embedded software** using C and Kotlin, reducing memory consumption by 30% and improving execution speed.
- **Developed and maintained RESTful APIs** using Spring Boot, enhancing system scalability and response times by 40%.
- **Debugged complex software issues** in embedded and backend applications, improving system reliability and reducing failure rates by 50%.
- **Collaborated with cross-functional teams**, participating in Agile development processes and design meetings.
- **Managed software releases** using GitHub and CI/CD pipelines, reducing deployment time by 50%.
- **Integrated low-level firmware components with high-level application logic**, ensuring seamless interaction between hardware and software.
- **Conducted performance benchmarking and optimized embedded software** for low-power consumption.
- **Worked on multithreaded applications**, ensuring efficient resource utilization and synchronization.
- **Assisted in developing test cases** and automated testing frameworks to validate embedded system functionalities.
- **Reviewed and refactored code to enhance maintainability** and adhere to coding best practices.

Education

Dalhousie University **Jan 2024 - Sep 2025**

Master of Applied Computer Science (Co-op Candidate) | ***GPA: 4.07/4.3*** *Halifax, Canada*

Charusat University **Jun 2018 - Apr 2022**

Bachelor of Computer Engineering | ***GPA: 8.7/10*** *Gujarat, India*

Projects

Embedded Systems & Wireless Communication **C | Python | GIT**

- **Developed a low-latency embedded system software in C**, ensuring efficient resource management and real-time performance.
- **Implemented multithreading and memory optimization techniques**, improving system throughput.
- **Debugged and troubleshot software functionalities**, ensuring seamless integration with hardware components.
- **Designed firmware modules for sensor data acquisition and processing**, enabling real-time decision-making.
- **Integrated communication protocols** (UART, SPI, I2C) for data exchange between embedded devices.

Wireless Signal Processing Simulator **C | Python | Networking Protocols**

- **Created a network simulation tool** to analyze wireless signal transmission performance, enhancing understanding of wireless protocols.
- **Optimized signal processing algorithms**, improving efficiency by 25%.
- **Simulated real-world wireless interference scenarios** and tested signal robustness under various conditions.
- **Implemented error-correction algorithms** to improve data transmission reliability.

ServiceHub | *Source Code* **ReactJS | Spring Boot (JAVA) | MySQL**

- Developed a scalable web application using **ReactJS**, **implementing modular UI components for a seamless user experience**. Integrated lazy loading and performance optimizations, **reducing page load time by 40%**.
- **Applied Object-Oriented Programming principles** (e.g., classes, objects, inheritance) to design modular and reusable code for the backend, ensuring maintainability and scalability.
- **Architected backend using Java Spring Boot and integrated it with a ReactJS frontend, achieving 99.9% uptime** and enabling seamless real-time interactions among over 1,000 active users.