DEV PATEL

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QUALIFICATIONS SUMMARY

Master of Applied Computing student with a foundation in C/C++, object-oriented programming, and embedded systems. Hands-on experience in Linux development, system-level debugging with GDB, and working knowledge of hardware verification practices. Skilled in writing and testing low-level code for reliable system behavior. Eager to apply digital design and verification concepts in validating SoC hardware at NXP Semiconductors.

EDUCATION

Master of Applied Computing — Sep 2024 – Present
University of Windsor — Windsor, ON

Bachelor of Engineering in Computer Science and Engineering — Jun 2020 – Apr 2024
Gujarat Technological University — Gujarat, IN

TECHNICAL SKILLS

- **Languages**: C, C++, Python, SystemVerilog (basic), Shell Scripting
- **Hardware and Tools:** FPGA (Xilinx – basic), Logic Simulators, Oscilloscopes (lab exposure)
- **Concepts:** Digital Design, Object-Oriented Programming, SoC Architecture, Testbench Development, Functional/System Testing
- **Operating Systems:** Linux (Ubuntu), Windows
- **Tools:** GDB, GCC, Git, Jenkins, JIRA, Postman, Bitbucket
- **Protocols:** Ethernet, IP, TCP/UDP, USB, Serial

PROFESSIONAL EXPERIENCE

Software Developer Intern (Java/.Net) — **Aug 2023 – Jun 2024**
PMC Retail

• Designed unit and integration tests using xUnit to validate internal services and application logic
• Debugged system-level performance issues and implemented backend improvements with a 30% latency reduction
• Developed RESTful APIs and integrated modules with MSSQL databases using T-SQL for reliable data flow
• Worked in a CI/CD environment (Jenkins) with Git version control, contributing to stable software releases
• Gained experience in exploratory testing and simulation of user behavior, aligning with SoC testing principles

Java Developer Intern — Jan 2023 – Jul 2023
Quix Solution

• Maintained automated test pipelines for RESTful microservices with JUnit and Postman
• Analyzed API performance under varied loads, simulating up to 200+ daily requests
• Deployed and monitored services on Azure Cloud, collaborating in Agile teams for quick iteration
• Focused on reliability testing, debugging logic errors, and maintaining detailed logs—skills directly applicable to SoC-level validation

PROJECTS

SoC Component Verification - Functional Testbench for ALU Simulation | C++, SystemVerilog, ModelSim, GDB, Linux

• Designed and implemented a functional testbench to verify a custom 4-bit ALU (Arithmetic Logic Unit) in SystemVerilog
• Developed C++ code to simulate input stimuli and compare expected vs actual ALU outputs under various logical operations
• Used ModelSim to simulate waveform behaviour and identify timing glitches during edge cases
• Debugged logic errors using GDB and GCC in a Linux environment, ensuring 100% functional coverage of test cases
• Gained hands-on experience with SoC verification flow including test plan development and result analysis

Pantry Pro - Smart Pantry Management App | React Native, Node.js, MongoDB, RESTful API, Barcode Scanning **| Link**

- Led QA efforts in a cross-functional team of 4, creating and managing a backlog of test cases covering core functionality
- Executed manual and user-based testing to validate features such as barcode scanning and recipe recommendations
- Conducted UAT sessions and documented feedback for iterative improvements
- Reduced feature-related bugs by 40% across 3 sprints using structured testing workflows

The Laptrix - Laptop Recommendation System | Java, Selenium, React JS, RESTful API, Web Scraping **| Link**

- Developed and automated end-to-end test cases using Selenium and JUnit for data accuracy and UI responsiveness
- Conducted functional and cross-browser testing to ensure consistent user experience across devices
- Integrated real-time data fetching logic using Java and verified scraped data accuracy through test assertions
- Improved backend processing time by 40% and front-end load speed by 35% after QA-driven optimization

LEADERSHIP & EXTRA-CURRICULAR ACTIVITIES

- Led a team of 4 developers to complete the Laptrix project and Pantry Pro, meeting all deliverables 2 weeks ahead of schedule
- Organized and conducted technical workshops on Java programming, OS fundamentals, and microservices architecture, training 25+ junior developers
- Participated in the 2023 HackGTU hackathon, securing 3rd place among 30 competing teams
- Active member of the Computer Science Student Association, contributing to community outreach programs and technical events
- Mentored junior developers on test-driven development and debugging practices during workshops