

PRADYU VASUDEV

Software Engineer I (Automation/Systems)

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EDUCATION

- University of Ottawa** Sep 2021 - Apr 2026
BASc. in Software Engineering - Dean's Honour List GPA: 3.9/4

WORK EXPERIENCE

- Ciena** Ottawa, ON
Software Engineer I - RSP, WaveRouter Platform Team Jul 2026 - Present
 - Implemented, debugged, and realigned WaveRouter regression tests with evolving platform architecture, resolving at least half of regression-suite errors by removing deprecated test code and partnering with system designers.
 - Published consistent regression results, reported defects found through platform testing, and proactively coordinated across teams to drive investigation and follow-up.
 - Streamlined test submission and result aggregation with AI-assisted tooling and generated scripts, and introduced an agentic workflow into the automation repository.
- Software Engineer Intern - Global R&D* May 2025 - Jun 2026
 - Designed and implemented a low-level debug command in C for SAOS data-plane, reducing manual workload by 60% through dynamic and sequential cache-table lookup; validated the workflow through on-target reproduction.
 - Owned unit testing initiatives using Cmocka, achieving a **2× increase** in line coverage while mentoring colleagues and resolving critical integration blockers.
- Health Canada** Ottawa, ON
Software Engineering Intern - Reports Control Division May 2024 - Aug 2024
 - Automated the Vaping Product Reports Regulations review process in Python, aggregating over 5,000 sales and ingredient reports and **reducing manual workload by 70%**.
 - Designed a relational SQL database schema using ER modeling to centralize fragmented compliance data, eliminating redundancy and **accelerating data retrieval** for regulatory audits.
- Field Effect Security** Ottawa, ON
Software Engineering Intern - Enterprise Applications Integration Sep 2023 - Dec 2023
 - Improved Power Apps and Azure Function workflows using C# and internal APIs, cutting form completion time by over **30%** and data retrieval time by **25%**.
- Ford Motor Company** Ottawa, ON
Software Infrastructure Intern - Product Development Department Jan 2023 - Apr 2023
 - Implemented automated stability tests using the Slash framework and Jenkins CI/CD to **improve build pipeline reliability by 20%** and prevent production regressions.
 - Streamlined validation in Python, resolving persistent test failures and **reducing manual debugging time by 5+ hours weekly**.

PROJECTS

Kairos Audio Engine 🎧 | C++, CMake, SPSC Queues, DSP

- Built an offline C++ audio analysis engine with a custom PCM16 WAV parser, lock-free SPSC transport between client/DSP threads, and energy-based onset detection; added smoke tests and docs to validate the end-to-end pipeline.

TECHNICAL SKILLS

- Languages:** C, C++, Python, Java, C#, SQL
- Frameworks & Tools:** CMake, Linux, Cmocka, Jenkins, Git, Docker
- Practices:** Automation, Regression Testing, Embedded Systems, DSP, Lock-free Programming, Unit Testing, CI/CD