Grant Achuzia

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EDUCATION

Carleton University Expected May 2026
Bachelor of Engineering in Computer Systems Engineering *Ottawa, Ontario*

EXPERIENCE

Lumentum Jan 2025 – Aug 2025
System Software Solution Test Intern | Design Verification & Test Intern *Ottawa, Ontario*

- Launched end-to-end test automation & CI/CD pipleines using GitHub Actions, Node.js, SeleniumWebDriver & the Tauri driver to deploy and validate sensor software installs/releases.
- Designed Bash-based scripts with ssh, gnoic, and core Unix utilities to automate connectivity checks, firmware upgrades, and software regression testing.
- Authored a modular Python CLI report generation tool that automatically produces professional testing reports in PDF, PPTX, and DOCX formats.

Maintenance Drone Co. May 2024 – Dec 2024
Software Developer Intern *Ottawa, Ontario*

- Earned TransportCanada Small RPAS Advanced Operations Certificate & piloted drones to capture high-resolution roof-survey imagery and telemetry for training datasets.
- Engineered a Python flight-planning suite with Shapely & Matplotlib to parse KML/XML geospatial data into optimized drone waypoints, cutting manual setup times.
- Implemented a NumPy-based grid downsampling & noise-filtering algorithm, sanitizing point-clouds while preserving critical geometry for Blender-based AI annotation.

Roof Maintenance Solutions May 2022 – Dec 2023
Software Developer Intern *Ottawa, Ontario*

- Created a Python class to streamline annotation data imports/exports in a custom report generator.
- Implemented regex-powered validation routines to detect and auto-correct XML survey annotation errors, boosting report reliability.

PROJECTS

Fire Alarm Notification System (*FANS*)
3rd Year Engineering Project | Python, JavaScript, HTML/CSS

- Composed a UI for live monitoring & customization of a fire alarm system using Python, JavaScript, & Flask.
- Modelled a Raspberry Pi Pico buzzer for the system, using MicroPython to integrate buzzing & LED notifications with real-time Firebase database monitoring.
- Configured sensor sensitivity & alarm triggers on a Raspberry Pi 4 to optimize *FANS*' responsiveness in detecting smoke & temperature changes.

Elevator Simulator
Real-Time Concurrent Systems Project — Java

- Implemented JUnit test classes and managed the testdata.txt file for validating the functionality of elevator-related classes & ensuring system reliability.
- Enhanced the Elevator Simulator's testing suite and state machine logic across 5 iterations, including updates to the elevator, floor, & scheduler subsystems.

ACTIVITIES

Canadian Engineering Competition (National Programming Category) Mar 2024
Bronze Medalists *Calgary, Alberta*

- Optimized routing on a CSV-driven 100×100 grid using an A* Python algorithm with environmental-cost heuristics.
- Developed a responsive web UI in HTML, CSS and JavaScript for visualizing extraction paths.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, C, C++, SQL, Bash, PowerShell
Technologies: Git, Jira, React, Docker, Flask, Figma, Linux, LaTeX, GitHub Actions
Concepts: Data Structures and Algorithms, CI/CD, Computer Architecture, Computer Networking, Agile, Scrum