GRANT ACHUZIA

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EDUCATION

Carleton University   *September 2021 − May 2026*
Bachelor of Engineering in Computer Systems Engineering   Ottawa, Ontario

PROFESSIONAL EXPERIENCE

Lumentum   *January 2025 − August 2025*
System Software Solution Test Intern | Design Verification & Test   *Ottawa, ON, Canada*
- Launched **end-to-end test automation and CI/CD pipelines** using **GitHub Actions, Node.js, Selenium WebDriver, and Tauri driver**, reducing manual regression test cycles from **hours to less than 30 minutes per release**.
- Designed **Bash-based scripts** with **SSH, gNOI/gNOIC, Unix utilities** to automate firmware upgrades & connectivity checks across **4 devices**, reducing engineer intervention by **80%**.
- Architected a **modular Python CLI reporting tool** to auto-generate **PDF & PPTX test reports**, saving the team **10 hours/week** on documentation & debugging.

Maintenance Drone Co.   *May 2024 − December 2024*
Software Developer Intern   *Ottawa, ON, Canada*
- Earned **Transport Canada Small RPAS Advanced Operations Certificate**; piloted drones to capture **1,000+ high-resolution survey images** for **AI training datasets**.
- Engineered a **Python flight-planning suite** (**Shapely, Matplotlib**) to parse **KML/XML geospatial data** into optimized waypoints, cutting manual route setup by **70%**.
- Instrumented **NumPy-based grid downsampling & noise filtering** to process point-clouds **2× faster** while preserving structural geometry, improving **Blender-based AI annotation efficiency**.

Roof Maintenance Solutions   *May 2022 − December 2023*
Software Developer Intern   *Ottawa, ON, Canada*
- Created a **Python class** to streamline **annotation data imports/exports**, reducing report prep time from **1 hour → <20 minutes**.
- Authored **regex-powered XML validation** to detect & auto-correct survey annotation errors, **boosting report accuracy by 40%** and reducing costly re-inspections.

PROJECTS

Cell Reminders
*Google Sheets Add-on/Script | **JavaScript, Apps Script, HTML/CSS***
- Developed a **Google Sheets add-on** that allows users to **create, view, and manage calendar events** directly from spreadsheet cells, supporting one-time and recurring reminders
- Designed a **live sidebar UI** with **real-time cell selection updates, input validation, and customizable notifications,** improving user productivity and reducing missed deadlines.
- Leveraged **Google Calendar & Sheets APIs** to ensure cross-platform compatability and seamless inteegration with user accounts.

Fire Alarm Notification System (FANS)
*3rd Year Engineering Project | **Python, JavaScript, HTML/CSS, Flask, Firebase, Raspberry Pi***
- Built a web UI for **live fire alarm monitoring & customization** using Flask, JavaScript & Python, enabling **real-time responsiveness (<2s update latency)**.
- Integrated a **Raspberry Pi Pico buzzer with MicroPython**, syncing alarms & LEDs to a **Firebase backend** for **99% uptime during stress testing**.

ACTIVITIES

Canadian Engineering Competition (National Programming Category)   *March 2024*
Bronze Medalist   *Calgary, AB, Canada*
- Optimized pathfinding on a **100×100 CSV-driven grid** with an **A* algorithm** using environmental heuristics.
- Developed a **responsive web UI (HTML/CSS/JS)** to visualize **real-time extraction paths**, improving judge evaluation clarity & usability.

TECHNICAL SKILLS

Languages: Python, C, C++, JavaScript, TypeScript, SQL, Bash, PowerShell, Java, Verilog, Ruby
Frameworks & Tools: React, Flask, Docker, Git, GitHub Actions, Figma, LaTeX, Apps Script
Platforms: Linux, Jira, Jenkins, Firebase, Google Workspace
Concepts: Data Structures & Algorithms, OOP, Concurrency, Computer Architecture, Computer Networking, CI/CD, DevOps, Agile/Scrum, Test Automation