Grant Achuzia

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EDUCATION

Carleton University   *September 2021 – May 2026*
Bachelor of Engineering in Computer Systems Engineering   Ottawa, ON

PROFESSIONAL EXPERIENCE

Lumentum   *January 2025 – August 2025*
System Software Solution Test Intern | *Design Verification & Test Intern*   *Ottawa, ON*
- Built end-to-end TypeScript test automation and CI/CD pipelines to cut manual regression cycles from hours to under 30 minutes per release via GitHub Actions + Selenium/Tauri E2E flows.
- Wrote Bash and SSH/gNOI/gNOIC scripts to automate firmware upgrades & connectivity checks across networked devices, reducing routine engineer intervention.
- Developed a modular Python CLI reporting tool to auto-generate PDF & PPTX test reports and surface failures, improving debugging turnaround and report consistency.

Maintenance Drone Co.   *May 2024 – December 2024*
Software Developer Intern   *Ottawa, ON*
- Engineered a Python flight-planning toolkit (Shapely, Matplotlib) to convert KML/XML geospatial data into optimized waypoint paths, streamlining mission setup.
- Implemented NumPy-based grid downsampling & noise filtering to accelerate point-cloud processing while preserving structural fidelity for downstream annotation in Blender.

Roof Maintenance Solutions   *May 2022 – December 2023*
Software Developer Intern   *Ottawa, ON*
- Created a Python utilities for annotation data imports/exports, improving report prep speed and data quality.
- Authored regex-powered XML validation to detect & auto-correct survey annotation errors, boosting report accuracy and reducing costly re-inspections.

PROJECTS

CU-Bytes   Ongoing
Engineering Capstone | *PyTorch, ResNet50, Flask, React Native/Expo, Azure, SQLite, TensorBoard*
- Architected and trained a PyTorch-based food classification model using ResNet50 transfer learning with GPU-optimized mixed precision training, achieving multi-class food recognition for campus dining.
- Engineered end-to-end ML pipeline including data preprocessing, model training with TensorBoard monitoring, checkpoint management, and inference API integration with Flask backend for real-time predictions.
- Developed React Native mobile app with image capture/scanning and Flask REST API with authentication, user profiles, and SQLite-based RBAC, deployed to Azure cloud infrastructure.

Cell Reminders
Google Sheets Add-on | *Apps Script, JavaScript, HTML/CSS, Google Calendar/Sheets APIs*
- Developed a production-ready Google Sheets add-on with dual Events/Tasks functionality, integrating Google Calendar API for bidirectional synchronization.
- Built responsive sidebar UI with tabbed interface (Events/Tasks), reactive cell selection tracking, input validation, and real-time form updates using HtmlService and client-side JavaScript for seamless user experience.

Fire Alarm Notification System (FANS)
Engineering Project | *Python, Flask, JavaScript, Firebase, Raspberry Pi*
- Engineered a real-time web monitoring dashboard with sub-second update latency for alarm status tracking and system configuration under local test conditions.
- Integrated Raspberry Pi Pico (MicroPython) with hardware peripherals (LEDs, buzzer) and Firebase Realtime Database for event synchronization, emphasizing reliability and clear operator feedback.

ACTIVITIES

Licensed Drone Pilot — Transport Canada Small RPAS Advanced Operations certified (PC2214005330).

2024 Canadian Engineering Competition — National Programming Category (Bronze Medalist) in Calgary, AB.

TECHNICAL SKILLS

Languages: Python, C, C++, C#, JavaScript, TypeScript, Java, SQL, Bash, PowerShell
Frameworks & Tools: PyTorch, Flask, React, React Native, Docker, Git, GitHub Actions, Firebase, Linux, Jira, Apps Script
Concepts: Machine Learning, Deep Learning, Transfer Learning, Data Structures & Algorithms, Concurrency, Systems/Networking, CI/CD, DevOps, Agile/Scrum, Test Automation