

Alan Pipko

437-214-4989 | apipko@uoguelph.ca | [Linkedin](#) | [Github](#) | [Portfolio](#) | Languages: English, French, Russian

EDUCATION

University of Guelph

Bachelor of Computer Science

Expected Graduation: Apr 2030

Relevant Courses: Programming, Data Structures, OOP, Micro Systems, Linear Algebra, Discrete Mathematics

WORK EXPERIENCE

Software Developer Intern

Vibraint | Neurotech Startup

Toronto, ON

July 2026 – Sep 2026

- Sole developer on the real-time charts in a **Java** desktop app for EEG-based stroke rehab
- Compared 3 smoothing methods across **25k** classifier samples to guide the team's filter choice
- Wrote a Savitzky-Golay filter with even-window support, checked against known values
- Swapped a hardcoded moving average for a **Spring** interface that reads the method from a config file
- Fixed crashes and misaligned plots caused by timer, bounds, race and phase-shift bugs
- Wrote **305** regression tests for the chart bounds logic, proven to fail when the bug returns

Automation Engineer

Allenby Accounting | Accounting Services Firm

Vaughan, ON

June 2026 – Sep 2026

- Automated ad-spend invoicing with a **Python** pipeline over the **Meta Marketing API** and TikTok data
- Replaced **10+** hours of manual invoicing each month across multiple client ad accounts
- Worked around a mid-cycle gap in Meta's billing API by combining **PDF** totals with Insights API splits
- Delivered branded invoice **PDFs** into Dext on a monthly **GitHub Actions** schedule with failure alerting
- Recovered a pipeline silently failing every run by moving an expiring **OAuth** token to refresh-token auth

Machine Learning Intern

LineChecks | Desjardins Portfolio Company

Vaughan, ON

Mar 2026 – Apr 2026

- Trained a **YOLO** model in **Python** to count people on courts, powering a live wait-time feature
- Improved detection across varied lighting and angles by labeling **1,000+** images of court activity
- Converted live occupancy counts into the wait-time estimates surfaced to users through a **Python** pipeline

PROJECTS

[Rewind](#) | *Python, FastAPI, Next.js, TypeScript, PostgreSQL, Redis*

- Built a course-material archive where students ask in plain English when they first saw a concept
- Built semantic search with **PostgreSQL** and **pgvector**, grouping repeated concepts by context
- Dated lecture files from filenames and syllabi, correct on 58 of 70 real course files and never once wrong
- Moved parsing and embedding into an **arq/Redis** job queue so large uploads never block the interface
- Enforced ownership with composite foreign keys on all 10 tables so no user can see another's files

[SnipSmart](#) | *JavaScript, React, JSON*

- Captured and processed on-screen regions in the background using **Chrome Extension APIs**
- Made on-screen text selectable and translatable by running **OCR** over captured snippets
- Fixed misplaced capture coordinates on scaled displays by accounting for device pixel ratio

CERTIFICATIONS

IBM Cybersecurity Fundamentals | *Issued by IBM SkillsBuild*

May 2026

TECHNICAL SKILLS

Languages: Python, C, Java, C#, SQL, JavaScript, TypeScript, HTML/CSS

Frameworks/Libraries: React, Next.js, FastAPI, Spring Boot, JavaFX, YOLO, Pandas

Tools: Git, Docker, PostgreSQL, Redis, Gradle, JUnit, Linux, Vite, Valgrind, Wireshark, REST APIs

Cloud & DevOps: GitHub Actions, AWS, Azure, Vercel, Render, Supabase