

Patrick Huynh

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EDUCATION

University of British Columbia

2024 — 2028

BASc. Civil Engineering, Co-op Program (GPA: 3.2/4.0)

Vancouver, BC

- **Honours & Awards:** Schulich Leader Scholarship (**\$120,000 national STEM merit award**)
- **Co-op Availability:** Available for a **4 month term** starting **May 2027**
- **Coursework:** Fluid Mechanics, Soil Mechanics, Solid Mechanics, Structural Mechanics, Engineering Materials, Multi-variable Calculus, Differential Equations, Statistics & Probability, Data Structures & Algorithms, Plane Surveying

National University of Singapore

Jan 2027 — May 2027

Academic Exchange Semester, Civil Engineering

Singapore

TECHNICAL SKILLS

Technical: AutoCAD, Civil 3D, Bluebeam Revu, S-FRAME, SOLIDWORKS, ArcGIS Pro, QGIS, V2I/CAV Technology

Big Data & AI: Python (Polars, Pandas, GeoPandas, Shapely, OpenCV, YOLO), SQL, Power BI, VBA, MATLAB, C++

Certifications: UBC Sauder PMI Project Management Certificate (In Progress), MTO Book 7, First Aid & CPR C

WORK EXPERIENCE

Transportation Engineer

May 2026 — Present

City of Ottawa — Co-op

Ottawa, ON

- Built tools processing **10+ TB** of GPS probe data to calculate corridor travel times for traffic trend analysis.
- Developed Python **computer vision** scripts (YOLOv26, OpenCV) to automate traffic counts for local traffic-calming.
- Mapped ITS assets for the **Confederation Line LRT Stage 2** by auditing civil and electrical as-built drawings.
- Supported **Arcadis** on Ottawa's TSMAP by benchmarking transportation policies across 12 peer municipal agencies.

Service Desk Analyst

Aug 2022 — Present

AgeCare — Casual, Remote

Calgary, AB

- Deployed software to audit dormant accounts and improve workflows, saving **\$60,000+** in annual operational overhead.
- Assisted in an enterprise data migration of **5,000+** user accounts across **20+** healthcare facilities during an acquisition.
- Executed phishing campaigns and enterprise IT security training to mitigate organizational network vulnerabilities.

EXTRACURRICULAR ACTIVITIES

UBC ITE Student Chapter

May 2026 — Present

Vice President of Finance

Vancouver, BC

- Administer operating budget and coordinate technical site tours/events, connecting **100+** students to industry leaders.

UBC Civil Engineering Council

Sep 2025 — Present

Webmaster

Vancouver, BC

- Maintain official digital communications infrastructure, updating the website for the community.
- Secured a **Google Workspace grant**, migrating existing student executive accounts to a custom domain.

UBC Orbit

Sep 2024 — Present

Ground Station & Communication Systems Engineer

Vancouver, BC

- Support the regulatory licensing for ALEASAT, ensuring compliance with international communication standards.
- Executed environmental testing at **ESEC-Galaxia (Belgium)**, validating structural resilience and verifying RF compliance for Adjacent Channel Power (ACP) & frequency drift throughout thermal vacuum chamber cycles.

PROJECTS

Real-Time ePaper Transit Board — 🌀

Apr 2025 — Sep 2025

- Built an ultra-low-power transit dashboard on a Raspberry Pi Zero 2 W and a 7.5" e-paper display, parsing **TransLink's GTFS-Realtime API** to calculate live transit departures and optimal travel routes.
- Engineered a Flask backend integrated with **Google Calendar** to suggest **context-aware trips**, optimizing rendering in Python (PIL) with partial screen refreshes to reduce power draw.