

Patrick Huynh

☎ +1 (604) 619-9828 ✉ patrick@patrickh.ca 🌐 patrickh.ca 💼 [patricklbh](https://www.linkedin.com/in/patricklbh) 📀 [patrickh39](https://github.com/patrickh39)

EDUCATION

University of British Columbia

Bachelor of Applied Sciences, Civil Engineering

2024 – 2029

Vancouver, BC

- Awarded Schulich Leader Scholarship valued at **\$120,000**

TECHNICAL SKILLS

Languages: Python, C/C++, Java, JavaScript, Bash, PHP, HTML/CSS, SQL, MATLAB, PowerShell

Developer Tools: SOLIDWORKS, Fusion 360, Altium Designer, Git, Docker, Microsoft Azure, VS Code, PyCharm

Technologies & Frameworks: Active Directory, Microsoft Entra, REST APIs, Node.js, Flask, React, .NET Core

EXPERIENCE

Ground Station Hardware Developer

September 2024 – Present

UBC Orbit

Vancouver, BC

- Designed and simulated a high-performance Power Amplifier (PA) and Low Noise Amplifier (LNA) switch for satellite communication subsystems.
- Conducted RF circuit analysis to optimize impedance matching, minimize insertion loss, and improve isolation between transmit and receive paths.

Service Desk Analyst

August 2022 – Present

AgeCare

Calgary, AB

- Resolved **Tier 1 & 2** support tickets across enterprise systems, improving response efficiency and contributing to a **measurable reduction in backlog**.
- Led organization-wide phishing simulation campaigns as part of cybersecurity training, increasing employee awareness and reducing click-through rates.
- Managed a migration of **over 5,000** user accounts from Chartwell Ontario to AgeCare, facilitating a seamless transition following the acquisition of **20+** long-term care establishments across Ontario.
- Completed a Hosted Exchange to Microsoft 365 rollover, overseeing **over 4,000** user mailboxes.

Health Gateway Advisory Board Member

September 2023 – May 2025

Government of British Columbia

Vancouver, BC

- Selected as **1 of 13** patient advisory board members for the Health Gateway project by the Ministry of Health, reporting to the Health IT Strategy Branch.
- Assisted with the deployment of the imaging reports function so that patients can view reports for **X-rays, MRIs, and ultrasounds**.
- Participated with healthcare providers, administrators, and policy makers to enhance the quality and effectiveness of Health Gateway for patients.

PROJECTS

ePaper Transit Board

April 2025 – Present

- Engineered a transit departure board that **displays real-time information** and shows the best route to take according to the next event from Google Calendar. Using a **Raspberry Pi Zero 2 W** and **7.5" Waveshare e-ink display**.
- Developed a **local Flask REST API** to serve information parsed from **Translink's GTFS feed**.
- Optimized UI rendering with PIL and partial refreshes for **minimal power draw** and visual latency.

AI-Powered IoT Parking Meter | 📄 Project Site

September 2022 – April 2023

- Worked to create an AI-Powered Parking Meter with the goal to **eliminate harmful emissions** caused by routine maintenance and vandalism. **Awarded bronze** at the Greater Vancouver Regional Science Fair.
- Conducted **45 trials** to test different scenarios such as the meter's ability to recognize and authenticate vehicles yielding a **95.6% accuracy rate**.

Cam Tag: A Portable Safety Device | 📄 Slide Deck

July 2022

- **Pioneered and prototyped** a backpack-mounted camera designed to identify and alert users of threats using AI.
- Assisted with the training of an ML model with **over 10,000** data points using **TensorFlow** to detect weapons.
- Pitched a fully functional prototype at Toronto Metropolitan University, **placing 1st** in a design competition.

HONOURS AND AWARDS

Schulich Leader Scholarship (\$120,000) Issued by <i>The Schulich Foundation</i>	2024
Ted Rogers Entrance Scholarship (\$2,000) Issued by <i>Rogers Communications</i>	2024
Dr. Jim McEwen Principal's Award (\$6,250) Issued by <i>David Thompson Secondary School</i>	2024
BC Achievement & District Scholarships (\$2,500) Issued by <i>Government of British Columbia</i>	2024
David Thompson Student Council Award (\$500) Issued by <i>David Thompson Secondary School</i>	2024
Recognition Award Issued by <i>University of New Brunswick</i> <ul style="list-style-type: none">Awarded at the culmination of the Lest We Forget project after delivering a keynote address.	2023
Bronze Medal (Senior Division) Issued by <i>Greater Vancouver Regional Science Fair</i> <ul style="list-style-type: none">Created an AI-Powered IoT Parking Meter to curb GHG emissions caused by routine maintenance.	2023
Gold Medal (1st Place) Issued by <i>Shad Canada</i> <ul style="list-style-type: none">Developed a portable safety device for vulnerable individuals that detects environmental threats, such as weapons.	2023
Best of Projects (1st Place) Issued by <i>UBC Geering Up Engineering & Design Competition</i> <ul style="list-style-type: none">Collaborated with a team to redesign thermosiphons using the engineering design process.	2022
Silver Medal (Intermediate Division) Issued by <i>Greater Vancouver Regional Science Fair</i> <ul style="list-style-type: none">Designed and tested experimental materials of HDPE plastics using beeswax and carnauba wax.	2021

PROFESSIONAL AFFILIATIONS

Canadian Society for Civil Engineering (CSCE)	2025 – Present
Institute of Electrical and Electronics Engineers (IEEE)	2025 – Present
Engineers and Geoscientists BC, Student Member (EGBC)	2024 – Present

INTERESTS & ACTIVITIES

<ul style="list-style-type: none">Toured TransLink's Operations & Maintenance Centre (OMC1 & OMC2), gaining first-hand insight into SkyTrain operations and the central control system in Vancouver.Enjoy exploring the outdoors through hiking, as well as doing the Vancouver Sun Run annually.	
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