

# Bradley Nguyen

647-686-9717 | bradleynguyen2004@gmail.com | [Portfolio](#) | [LinkedIn](#) | [GitHub](#)

## EDUCATION

**Carleton University, Bachelor of Computer Science, Honours Program (Co-op)** Ottawa, ON  
*Software Engineering Stream - Major CGPA: 3.77/4.0* 2023 – 2027

**Relevant Coursework:** Abstract Data Types and Algorithms, Object-Oriented Software Engineering, Computer Systems, Web Development, Programming Paradigms

## EXPERIENCE

**dynaCERT Inc.** May 2025 – December 2025  
*Software Developer | Co-op | TypeScript, React, Node.js, C++, MySQL, Docker* Toronto, ON

- Architected and deployed a full-stack **industrial IoT monitoring dashboard** with **18 RESTful APIs** and **20+ React components**, processing real-time telemetry from a **MySQL backend** for **450+ H<sub>2</sub> generator units** across multiple time granularities
- Implemented a scalable **Node.js microservices architecture** with **7 controllers** and **9 services**, containerized via **Docker** for development and production, and deployed to **hydralytica.com** serving live industrial data
- Built a comprehensive **data visualization and reporting system** featuring **6 table modules**, **40+ dynamic filters**, and **5 automated Excel export formats**, enabling cross-fleet performance analytics for **120+ enterprise clients**
- Optimized system reliability through **multi-threaded ZMQ communication**, **MD5-validated MySQL logging**, and CI-based deployments, increasing data throughput by **2x** and reducing QA effort by **70%**

## PROJECTS

**t:slim X2 Insulin Pump Simulator** | [GitHub](#) | *C++ (Qt), MVC* Jan.–Apr. 2025

- Built a full **Qt** desktop simulator with modular **MVC** design for pump, glucose, and insulin control logic
- Implemented **Control-IQ** basal adjustment algorithm and **30x** accelerated clock for testing
- Added **JSON telemetry storage** and centralized **AlertController** for safety history and PIN security

**Dumpster Diver** | [GitHub](#) | *Python, TensorFlow, Arduino, SQLite, Flask* Mar. 2025

- Winner at **cuHacking 6** (\$300, 300+ participants) for an **IoT-enabled waste sorting system** using **TensorFlow CNNs**, **Flask APIs**, and **Arduino servos** for automated material classification, processing **over 100+ items/min** with **95% accuracy**
- Trained **TensorFlow CNN** for object detection, connected to Arduino servos via Flask API
- Designed **SQLite backend** for live dashboard logging and activity analytics

**Playtopia** | [GitHub](#) | *Starknet, React, Flask, OpenCV, Python* Jan. 2025

- 2nd place – Best Use of Starknet Challenge** at **uOttawaHack 7** (\$2.2K, 850+ participants)
- Built **blockchain game creator** with **React**, **Starknet contracts**, and **Flask** backend
- Used **OpenCV** ball tracking to trigger on-chain rewards, achieving **100% accuracy**

## TECHNICAL SKILLS

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

**Frameworks/Libraries:** React, Node.js, Express.js, Flask, Tailwind, Vite, MongoDB, Electron

**Developer Tools:** Git, GitHub, Docker, Postman, Google Cloud Platform, Microsoft Azure, Linux/Unix, Jira, Vercel

## EXTRACURRICULAR ACTIVITIES

**cuHacking** Sep. 2025 – Present  
*Hacker Experience Organizer* Ottawa, ON

- Coordinate and enhance the participant experience for **300+ hackers** through event planning, workshops, and sponsor engagement initiatives
- Collaborate with cross-functional teams to manage logistics, marketing, and hacker communication using **Notion**, **Discord**, and **Google Workspace**
- Support technical workshops and hackathon preparation events to promote inclusivity and technical growth among university participants