

Bradley Nguyen

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EDUCATION

Carleton University, Bachelor of Computer Science, Honours Program (Co-op) Ottawa, ON
Software Engineering Stream - Major CGPA: 3.7/4.0 2023 – 2027

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres, MySQL, SQLite), JavaScript, HTML/CSS, TypeScript, PHP
Frameworks/Libraries: React, Node.js, Express.js, Flask, Tailwind, Vite, MongoDB Atlas, FastAPI
Developer Tools: Git, GitHub, OpenCV, MediaPipe, Docker, GitHub Actions, Arduino IDE, Postman, Google Cloud Platform, Microsoft Azure, VSCode, IntelliJ, Eclipse, Linux/Unix, Streamlit, Jira, Excel

WORK EXPERIENCE

Software Developer May. 2025 – Present
dynaCERT Inc. Toronto, ON

- Incoming Software Developer for Summer 2025

PROJECTS

- Dumpster Diver** | [GitHub](#) | *Python, JavaScript, TensorFlow, Keras, PHP, SQLite, HTML/CSS* Mar. 2025
- **Challenge Winner at cuHacking 6** earning **\$300** out of **300+** participants
 - Built an end-to-end **automated waste sorting system** using **TensorFlow**, **Keras**, and **OpenCV**, integrated with **Arduino**-controlled hardware for real-time object detection and actuation
 - Designed and implemented a **SQLite** database to log classification events, store system activity, and support backend queries for live dashboard updates
 - Developed a **Flask**-based web interface with real-time data visualization powered by **Chart.js**, enabling users to monitor recycling trends and system status
 - Engineered a full-stack **IoT data pipeline**, enabling seamless communication between hardware, ML models, database, and front-end components
- QMove** | [GitHub](#) | *React, MediaPipe, OpenCV, Python, JavaScript, MongoDB, OpenAI API* Jan. 2025
- Developed a **full-stack physiotherapy tracker** with **95% ROM tracking accuracy**, using **MediaPipe** and **OpenCV** for real-time motion tracking at **QHacks 2025**
 - Designed a **modular Python backend** with **RESTful APIs**, improving **data processing efficiency by 40%** and supporting **AI-driven exercise recommendations** via **OpenAI's API**.
 - Logged **1000+** therapy sessions securely in **MongoDB** while ensuring **99.99% uptime** through cloud deployment with **CI/CD pipelines**.
- Playtopia** | [GitHub](#) | *Starknet, React, Flask, OpenCV, Python, Tailwind, Vite, TypeScript, Cairo* Jan. 2025
- Won **2nd place** for the **Best Use of Starknet Challenge** at **uOttHack 7**, earning **\$2,200** out of **850+** participants for developing a **blockchain-based game creation platform**.
 - Developed an **interactive game platform** with **Starknet smart contracts**, **React**, and **Python**, supporting **1000+** game sessions and **100+** user-created levels.
 - Integrated **OpenCV** for **real-time ball detection**, improving accuracy by **20%** and triggering **Starknet smart contracts** to reward players with **STRK tokens**.
 - Engineered **hardware-software integration** with **Python** for game controllers and **real-time blockchain updates**, achieving **100% accuracy** in tracking game outcomes.
- The Heart Stopper** | [GitHub](#) | *Python, OpenCV, MediaPipe, Arduino, Serial Communication* Sep. 2024
- Won **1st place** for **Best uOttawa x Carleton Collaboration** at **Hack the Hill II**, securing **\$300** out of **800+** participants for developing a **gesture-controlled energy drink dispenser**.
 - Optimized **hand-tracking** using **OpenCV** and **MediaPipe**, increasing **gesture recognition accuracy by 35%**, processing **50+** hand positions per second.
 - Implemented **real-time serial communication** between **Python** and **Arduino**, achieving **100% reliability** in controlling servo motors for liquid dispensing.