

Skills

**Programming Languages:** C/C++, C#, Python, Java, Kotlin, HTML, CSS, JavaScript/TypeScript

**Frameworks & Libraries:** React, Node.js, PyTorch, Keras, scikit-learn, OpenCV, Qt

**Tools & Technologies:** QGIS, Git, Cmake, Visual Studio, Android Studio, Jira, SQL, Windows, Linux, MS Office, LibreOffice, SharePoint

**Areas of Expertise:** Web Development (Full Stack),Application Development Embedded Systems, Electronics Engineering

**Other:** Fully Bilingual (French / English)

Education

**Bachelor’s in Computer Science** – 2024  
*Université du Québec en Outaouais, Gatineau (Québec)*

**Technical DEC in Programmable Electronics Engineering** – 2021  
*Cégep de l’Outaouais, Gatineau (Québec)*

Professional Experience

Garden Associate | Home Depot – 2025

- Offered customer service.
- Processed customer transactions and deliveries.
- Kept the store clean, well-organized, and properly merchandised.
- Resolved customer complaints in a professional manner.
- Managed inventory.
- Cared for the plants.

Research Assistant | Université du Québec en Outaouais – 2023

- Conducted research and collected data from documentation, surveys, and lab experiments.
- Wrote Python and SQL scripts to automate testing processes and analyze results.
- Assisted in redacting academic documents and articles for publication.

Teaching Assistant | Université du Québec en Outaouais – 2023

- Assisted in teaching web development concepts and practical exercises in class.
- Prepared course content and graded student projects related to web development.

Web Publisher and Maintainer (Internship/FSWEP) | Employment and Social Development Canada – 2021–2022

- Collaborated with users to establish specifications for web development projects.
- Updated intranet sites and handled modification requests from other departments.
- Wrote technical documentation for web projects.
- Helped with the creation of the new SharePoint site

Electronics Engineering Technologist | AV-tech – 2020 (Internship)

- Installed and maintained embedded systems for building security.
- Configured network and controller hardware on-site.
- Repaired damaged equipment and set up video surveillance systems.

Electronics Engineering Technologist | Cégep de l’Outaouais – 2019–2020

- Designed, developed, and tested a greenhouse controller using C++.
- Developed a long-term cloud storage system for data management.
- Created an Android app in Java for system monitoring and control.
- Completed the analysis of the client’s requirements and wrote a specification document.

Cadet | CCMRC 236 Gatineau – 2012–2019

- **2016 to 2019:** Staff cadet.
  - Planned and taught lessons.
  - Lead a division.
  - Supervised cadets.
- **Summers of 2017 and 2018:** Sailing instructor and camp counselor.
  - Prepared theoretical courses and taught sailing
  - Supervised a group of teenagers.
- **2018 to 2019:** Coxswain.
  - Responsible for the smooth running of activities.
  - Lead the parades.
  - Organised event with the help of the officers and the staff cadets.

Projects

Utility Pole Position Detector 2024

- Trained a model based on YOLO to detect utility poles in images.
- Built a database of streetview images with their geospatial metadata obtained through the streetview API.
- Wrote code to calculate the position of utility poles based on their position in streetview 360 images and operate on the geospatial data to create a map in QGIS.

Obstacle Avoidance Agent - 2023

- Trained a car agent using PPO to avoid obstacles in a simulated world (CARLA and F1tenth).
- Determined the reward function, adjusted the hyperparameters, set up the environment, inputs and outputs of the agent.

Greenhouse Controller – 2019–2020

- Designed and implemented a microcontroller-based system to regulate temperature, humidity, and light conditions for plant growth optimization.
- Developed an Android application for remote monitoring of the greenhouse environment.

Publications

- Co-authored research paper: *Analysis of Cryptographic CVEs: Lessons Learned and Perspectives*
  - Raphaël Khoury, Jérémy Bolduc, Jason Lafrenière-Nickopoulos, Abdel-Gany Odedele