

# IBRAHIM AL-HOWAID

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## 🎓 EDUCATION

**Honours Bachelor of Science in Computer Science (Co-op Stream)**  
*University of Ottawa*

09/2026 – Present | Ottawa, ON

**OCDSB SWIFT Program**  
*SWIFT Launch Secondary*

02/2026 – 06/2026 | Ottawa, ON

- Selected for a competitive co-op program in Kanata North Technology Park, offering hands-on experience with emerging technologies.
- Designed and developed a full-stack clinical EMR web application for Carleton University's nursing simulation lab, featuring role-based authentication, a real-time instructor analytics dashboard, and automated PDF patient assessment generation
- Toured and received technical briefings from industry leaders including BlackBerry QNX, Nokia, Telesat, Nordion, Ross Video, and the NRC Canadian Photonics Fabrication Centre, gaining direct exposure to embedded systems, 5G infrastructure, satellite communications, nuclear medicine supply chains, and broadcast technology.

**Sir Robert Borden High School**

09/2022 – 06/2026 | Ottawa, ON

## 📁 PROJECTS

**Wireless Shop Doorbell**  
*ESP32 · ESP-NOW · C++ · Fusion 360*

02/2026 – 06/2026

- Engineered a custom wireless doorbell system with C++ firmware (Arduino IDE) with 2 ESP32 microcontrollers and the ESP-NOW protocol for reliable, router-free peer-to-peer communication.
- Optimized hardware for power efficiency via an RTC-woken deep-sleep transmitter and wall-powered receiver, and collaborated to design and 3D-print a custom weatherproof enclosure using Fusion 360.

**Carleton University Simlab EMR**  
*Python · Flask · PostgreSQL · ReportLab · JavaScript*

03/2026 – 06/2026

- Built a clinical nursing simulation EMR used by Carleton University nursing students and instructors in an active university environment.
- Implemented role-based access control, CSRF protection, and session-based authentication.
- Developed an instructor admin panel with real-time student activity tracking and bulk PDF chart export
- Designed a multi-page PDF generation engine rendering full patient assessment reports from live charting data, with per-page footers stamping the student who charted and the instructor who exported.
- Coordinated with Carleton University faculty to customize the EMR to specific course requirements.
- Conducted rigorous testing and QA to ensure system reliability and security under active use.

**Personal Portfolio Website**  
*JavaScript · GSAP · HTML/CSS*

2026

- Built a custom, responsive portfolio website from scratch using vanilla HTML, CSS, and JavaScript without relying on templates or frameworks.
- Implemented interactive UI components including scroll-triggered reveal animations, an interactive 3D tilt effect on project cards, a typewriter intro, and a modal system that surfaces detailed project write-ups, with a layout that adapts cleanly from desktop to mobile.

## 📁 EXPERIENCE

**Youth in Policing Initiative**  
*Ottawa Police Service*

12/2023 – 03/2024 | Ottawa, ON

- Developed teamwork, communication, and leadership skills through diverse work assignments.
- Maintained confidentiality and professionalism while handling sensitive information in a police environment.
- Participated in educational workshops to gain insight into law enforcement and community service.

**Teaching Assistant**  
*Terre-des-Jeunes School*

06/2022 – 09/2022 | Ottawa, ON

- Managed document workflow by photocopying, sorting, and distributing educational materials and communications, enhancing the accessibility of course materials for students and educators in the Arabic language Sunday school program.
- Demonstrated excellent communication skills by addressing general inquiries from students, parents, and faculty via phone and in-person, providing helpful and informative responses.

## 📁 CERTIFICATES

**Emergency First Aid + Level C CPR + AED** — Certified with Saint John Ambulance | **Driver's License** — Class: G2 |

**AODA (Accessibility for Ontarians with Disabilities Act)** — OSG | 2026 | **WHMIS** — Vector Solutions | 2026

## 🧠 SKILLS

**Strong organizational and time management skills**

**Languages:**

Python, JavaScript, C++, SQL

**Proficient written and oral communication skills in English, French, and Arabic**

**Web:**

Flask, HTML/CSS, PostgreSQL, SQLAlchemy

**Strong communication and teamwork & Quick to learn new tools**

**Tools:**

Git/Github, VS Code, SQLite, Arduino IDE