

Massylia Mahdi

Ottawa, ON

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Education

Bachelor of Applied Science – Computer Engineering

Sep 2022 – Present

University of Ottawa, Ottawa, ON

Projects

MediTrack Dispenser

Fall 2025 – Present

- Designed and implemented a smart medication dispenser integrating Raspberry Pi, ESP32, sensors, NFC/BLE bracelet, stepper motor, and a React–Firebase mobile app
- Designed a secure hardware–software architecture with access control, data protection, and traceability
- Implemented Firebase Authentication for multi-role access (Patient, Doctor) with real-time Firestore logging of schedules and intake
- Applied Agile methods, GitHub CI/CD, and automated tests to validate hardware–software integration

Gîte du Djurdjura – Full-Stack Website (In Progress)[Source on GitHub](#)

Winter 2026

- Built a responsive guesthouse website (HTML/CSS/JS) hosted on GitHub Pages
- Created booking UI with form, Litepicker calendar, gallery, and Google Maps
- Added AOS scroll effects, modular CSS, and mobile-first UX
- Improving accessibility, performance, and adding multilingual support

Pipelined RISC Processor – VHDL

Winter 2025

- Implemented a 5-stage pipelined RISC processor with hazard detection and forwarding units
- Verified functionality and timing using Quartus II; demonstrated instruction execution on FPGA

On-Demand Custom PC Service / Android App

Fall 2024

- Developed a Java mobile app with role-based authentication and SQLite database for real-time inventory and order management
- Created UML diagrams (class, activity, sequence) to model system architecture and workflows
- Integrated animations to enhance user experience (splash screen, screen transitions) using XML

Experience

uOttawa: Teaching Assistant for Advanced Computer Systems Design

Jan 2026 – Apr 2026

- Assisted with labs and FPGA-based system demonstrations (CPU, pipelining, memory hierarchy)
- Marked lab reports, quizzes, and midterms via Brightspace following department standards
- Provided technical support on VHDL designs, debugging, and system architecture concepts

City of Ottawa: Service Representative

Sep 2023 – Present

- Handled registrations, payments, and customer inquiries (~10+ interactions/day)
- Recommended programs and services based on client needs and maintained accurate records

The Royal Canadian Mint: Boutique & Tour Guide

Summer 2023, 2025

- Delivered bilingual guided tours, explaining coin production and history to diverse audiences
- Promoted and sold Mint products, achieving high visitor satisfaction

Shared Services Canada/Government of Canada: Junior IT Analyst

Jan 2024 – Aug 2024

- Developed and maintained a SharePoint site with an intuitive interface and optimized content
- Leveraged Microsoft 365 apps to improve team collaboration and streamline project management
- Resolved technical challenges and design issues during development, ensuring timely project delivery
- Organized and hosted Teams meetings for communication and align team efforts with project goals

Technical Skills

- **Programming & Software:** Python, Java, C, C++, HTML/CSS, Go (learning), JavaScript/TypeScript, ReactJS, Node.js, AWS, Firebase, SQLite, MySQL, Assembly, VHDL, intro to Verilog, Matlab, Unix
- **Developer Tools:** Git, AI TOOLS, Linux, Android Studio, Jira, Microsoft Office, VMware, Cisco Packet Tracer, Wireshark

Languages & Certifications

- **Languages:** Fluent in English and French

- **Security Clearance:** Government of Canada Reliability Status (Active)