



## Summary of Qualifications

- Expertise in programming and software development: Python, Java, C++, TypeScript, JavaScript
- Web development skills: HTML, CSS, Bootstrap, Angular, Drupal, Sitelmprove
- Knowledge of Agile and DevOps methodologies, as well as CI/CD practices with GIT and GitHub Actions
- Experience with Quality Assurance (QA) principles and various categories of software testing
- Detail-oriented, strong analytical skills, self-motivated, proactive, independent and collaborative
- Fluent in French (spoken and written), with functional proficiency in English

## Educations

**Bachelor of Applied Science in Software Engineering (Co-op),  
Management and Entrepreneurship in Engineering Option**

*University of Ottawa*

09/2020 - 09/2025  
Ottawa, Ontario, Canada

## Projects and Achievements

- **Moctar's Portfolio:** Developed a personal web application using Angular CLI and NG Bootstrap to showcase my achievements and apply some of my software engineering skills. Utilized GitHub Actions and GitHub Pages for continuous integration and deployment. Available live at: mackthar.ml.
- **Spring Harvest:** Extended an open-source implementation to enable developers to generate APIs with GraphQL, overcoming the limitations of REST. Technologies used: Spring Java, Docker, GraphQL, JPA, PostgreSQL, and more.
- **HMS:** Designed a Hospital Management System (HMS) that integrates patient, supply, and staff management using Clean Architecture and Domain-Driven Design(DDD) principles. Technologies: Spring Boot, Kotlin, Docker.
- **Real-time Alarm System:** Developed a system with Nucleo-F446RE and FreeRTOS through STM32Cube, integrating a keypad, motion detector, buzzer, and LCD screen for enhanced real-time security.

## Relevant Skills

- **Requirements and Project Management:** Skills acquired through various courses and academic projects
- **Databases:** Experiences with relational databases, and Firebase gained while working on personal projects
- **Containerization:** Abilities with Docker, learned while containerizing a PostgreSQL database for an API
- **Communication:** Professional writing of emails, technical reports, or meeting minutes
- **Documentation:** Proficiency with MS Office, G Suite, and Acrobat Pro for WCAG-compliant document creation
- **Strong interest** in Software Development, Cybersecurity, AI/ML, Embedded Systems, Project Management and more
- **Willingness** to learn new skills, ramp up quickly, and confidently bring new ideas to the team

## Work Experiences

**Information Technology Systems Developer - Co-op Intern**

*IT Solutions | Information Technology | University of Ottawa*

01/2025 - 08/2025  
Ottawa, Ontario, Canada

- Developed web-based IT systems using Drupal 10, integrating Docker, DDEV, and Composer
- Migrated and upgraded platforms from Drupal 7 to Drupal 10
- Designed and implemented dynamic forms using Drupal Webform Structure
- Created custom modules to enhance form features or alter behaviors with JavaScript and PHP
- Worked in an Agile environment, managing tasks and sprints using Jira
- Utilized GitLab for version control, code collaboration, and CI/CD integration

**Accessibility-Compliant Web Content Developer - Co-op Intern**

*Human Rights Office | University of Ottawa*

09/2022 - 12/2022  
Ottawa, Ontario, Canada

- Supported the team during the migration, and maintenance of the Office's websites
- Created and managed web pages with Drupal 9 and guaranteed quality assurance with Sitelmprove
- Ensured compliance and accessibility of content and communications (WCAG Standards)