

# Moe Bachrouch

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## SKILLS

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**Programming Languages:** Java, Python, SQL, JavaScript, HTML, CSS, C, C++, Elixir

**Frameworks/Libraries:** Spring Boot, React.js, Node.js, jQuery, Bootstrap

**Developer Tools:** Linux, Bash, Git, Microsoft SQL Server, ConcourseCI, Maven, Gradle, RabbitMQ

**Testing Tools:** JUnit, Mockito, Postman, Selenium, SoapUI

**Software Engineering:** Object-Oriented Programming, Design Patterns, Test-Driven Development, Software Development Life Cycle, SOAP & REST API, Agile Scrum

## EDUCATION

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### B.A.Sc. Software Engineering

September 2019 – Present

*University of Ottawa*

*Ottawa, ON*

- 3rd year student with expected graduation in December 2023
- GPA: 9.9/10.0 or 3.9/4.0 (Dean's List)
- Courses: User Interfaces; Databases; Operating Systems; Computer Networking; Data Structures & Algorithms

## EXPERIENCE

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### Software Engineer (Co-op)

September 2021 – Present and January 2021 – April 2021

*Manulife Investment Management (John Hancock)*

*Toronto, ON*

- Collaborated with stakeholders and Agile Scrum team to decommission a database by building microservices and REST APIs using Java Spring Boot and SQL Server
- Developed front-end features in the quantitative investment strategy system application using React.js and REST APIs, resulting in improved UX for quant analysts and portfolio managers
- Helped the engineering team migrate from SQL Server to Azure SQL and from GitLab to GitHub using Flyway, PowerShell, YAML, and ConcourseCI, allowing for a better development environment for engineers
- Presented newly developed features to clients through software demos

### Python Teaching Assistant

September 2021 – Present

*University of Ottawa's Faculty of Engineering*

*Ottawa, ON*

- Performed teaching assistant and lab monitor roles for first year Python course
- Presented and monitored weekly laboratory sessions for first year Python students
- Hosted weekly office hours to explain and clarify computing concepts in Python for first year students
- Developed solutions and corrected assignments, labs, and exams

### Interoperability Agent and Developer (Co-op)

May 2020 – August 2020

*Employment and Social Development Canada*

*Gatineau, QC*

- Helped build, maintain, and test REST and SOAP APIs using Java Spring Boot, Apache Camel, SoapUI and XML as a member of an Agile Scrum team which ensured quality of Web services used across Canada
- Delivered presentations to team members and wrote Confluence documentation, contributing to the adoption of contract-first REST APIs
- Participated in a 2-month long Scrum Master course

## PROJECTS

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**moebachrouch.com** | *HTML, CSS, JavaScript, Bootstrap, jQuery, Formspree, AOS library*

- Designed, developed, and hosted a personal portfolio website with a custom domain using the Bootstrap library
- Implemented a contact form using Formspree and validated the form using JavaScript, jQuery, and RegEx
- Embellished the website by adding animations using the AOS on-scroll animation library

**Expense Tracker** | *Java, Spring Boot, React.js, H2 Database, Maven*

- Full-stack web application serving as an expense tracker, including a REST API
- The code for this application implements the MVC architectural pattern
- Built as a practice project for full stack development while applying good software engineering principles

**Menace** | *Java*

- Machine-learning Tic-Tac-Toe algorithm based on a 1961 paper by Donald Michie
- AI learns how to play automatically via reinforcement learning
- The system can be trained against a random player, a perfect player, or against itself