

# Moe Bachrouch

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## EDUCATION

### B.A.Sc. in Software Engineering (Co-op)

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
- Courses: User Interfaces; Databases; Operating Systems; Computer Networking; Data Structures & Algorithms

## SKILLS

**Spoken Languages:** English, French, Arabic, Spanish

**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, REST API

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

**Software Engineering:** Object-Oriented Programming, Design patterns, Test-Driven Development, Agile Scrum

## EXPERIENCE

### 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

### Python Teaching Assistant

September 2021 – Present

*University of Ottawa, 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 assessment 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/XSLT as a member of an Agile Scrum team which ensured quality of Web services used across Canada
- Delivered presentations and wrote Confluence docs which contributed to the adoption of contract-first REST APIs
- Participated in a 2-month long Agile Scrum course

## PROJECTS

[moebachrouch.com](http://moebachrouch.com) | *HTML, CSS, JavaScript, Bootstrap, jQuery, Formspre, AOS library*

- Designed, developed, and hosted a personal portfolio website with a custom domain using the Bootstrap library
- Implemented a contact form using Formspre 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

**Service Ontario mobile app** | *Android Studio, Java, Firebase, CircleCI*

- Contributed with 4 classmates on a course project Android app to mimic Service Ontario
- Implemented functionalities such as user registration, authentication, and document upload and deletion

[Menace](#) | *Java*

- Developed a machine-learning Tic-Tac-Toe algorithm for a course project based on a 1961 paper by Donald Michie
- The AI learns how to play automatically against a human via reinforcement learning