

# Moe Bachrouch

[GitHub profile](#) | [LinkedIn profile](#) | [moe.bachrouch@gmail.com](mailto:moe.bachrouch@gmail.com) | 613-805-4972

## SKILLS

---

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

**Frameworks/Libraries:** Spring Boot, React.js (AntDesign, MaterialUI), Node.js, Express.js, jQuery, Bootstrap

**Tools:** Microsoft SQL Server, Git, Apache (Maven, Camel, Kafka), ConcourseCI, MongoDB, JIRA

## EXPERIENCE

---

### Software Engineer (Co-op)

January 2021 – April 2021 & September 2021 – Present

*Manulife Financial Corporation*

*Toronto, ON*

- Developed REST APIs using Java Spring Boot to decommission the Quant database which reduced business costs
- Taught myself React.js to develop frontend features which improved UX for quant analysts and portfolio managers
- Built a feature to fetch and validate security cashflows from multiple SQL databases using Spring JPA and JDBC
- Wrote unit tests using Groovy and mocked REST APIs using Postman and Microsoft SQL Server
- Monitored logs for existing Java microservices in Pivotal Cloud Foundry platform and addressed production bugs
- Wrote Flyway and PowerShell scripts and set up ConcourseCI pipelines to support migrations from GitLab to GitHub and SQL Server to Azure SQL which improved the development environment for engineers

### Python Teaching Assistant

September 2021 – Present

*University of Ottawa, Faculty of Engineering*

*Ottawa, ON*

- Recorded weekly explanation videos and hosted laboratory sessions for first year Python students
- Hosted weekly office hours to explain computing concepts in Python for first year students
- Developed assessment solutions and provided feedback for assignments, labs, and exams

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

May 2020 – August 2020

*Employment and Social Development Canada*

*Gatineau, QC*

- Taught myself Spring Boot and Apache products (Camel, Maven, Kafka) to build and maintain REST APIs supporting early COVID-19 government operations
- Initiated skeleton of backend API used in Web services supporting Canada Pension Plan and Old Age Security
- Tested REST/SOAP APIs using Postman and SoapUI before the release of Government services during COVID-19
- Participated in Agile Scrum sprint planning, daily scrum, sprint review, and sprint retrospective meetings

## EDUCATION

---

### B.A.Sc. in Software Engineering - GPA 3.9/4.0, Dean's List

September 2019 – Present

*University of Ottawa*

*Ottawa, ON*

- Relevant courses: Software Design and Architecture, User Interfaces, Databases, Computer Networking

## PROJECTS

---

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

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

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

- Collaborated 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

## ACHIEVEMENTS

---

- Ranked in top 3% among 200 students in a Python course at uOttawa after learning Python for the first time
- Received multiple engineering scholarships for stellar academic performance and community engagement
- Built a personal custom PC with the help of Google, Reddit, pcpartpicker, and user manuals for the parts