

Moe Bachrouch

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SKILLS

Languages: Java, JavaScript, Python, C, 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 and implemented backend services to perform financial calculations using Java Spring Boot to decommission the Quant database which reduced business costs
- Taught myself React.js to develop frontend features such as tables generated from Excel spreadsheets while interacting with a REST API in the backend 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

- Presented and hosted weekly 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 frameworks (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 | CGPA 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 | *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

[RLC Circuit Design](#) | *C, PLplot library*

- Built a C application from the ground-up using the PLplot library
- The program plot a function derived from Kirchhoff's second law based on user input by using an incremental search root-finding method with a total of 100 points

[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