Moe Bachrouch

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SKILLS

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

EDUCATION

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

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*
- Held teaching assistant and lab monitor responsibilities 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 Scrum Master course

PROJECTS

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

Service Ontario mobile app | *Android Studio, Java, Firebase, CircleCI, GitHub Actions*
- Contributed with 4 classmates on a course project mobile app to mimic service Ontario
- Implemented functionalities such as user creation, authentication, and document upload and deletion