MOE BACHROUCH

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EDUCATION

B.A.Sc. in Software Engineering | *CGPA 9.89/10.0, Dean's List*　　　　September 2019 – Present
University of Ottawa　　　　*Ottawa, ON*
- Relevant courses: Software Design and Architecture, User Interfaces, Databases, Computer Networking

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 and 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

Software 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 government Web services including early COVID-19 operations in an Agile Scrum environment
- 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

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

PROJECTS

www.moebachrouch.com | *HTML, CSS, JavaScript, Bootstrap, jQuery, Formspree, AOS library*
- Designed, developed, and deployed an HTTPS 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 plots 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

Mohamed Bachrouch

Courses

Code	Title	Term	Grade	Units
		2019, Fall		
ADM1340	FINANCIAL ACCOUNTING		A+	3.00
ECO1104	INTRODUCTION TO MICROECONOMICS		A+	3.00
ENG1112	TECHNICAL REPORT WRITING		A+	3.00
ITI1120	INTRODUCTION TO COMPUTING I		A+	3.00
SEG2900	PROF.COMM.RESP		A+	3.00
CGPA	10			
		2020, Winter		
ADM2320	MARKETING		A	3.00
BPS1101	DRUGS 101		A+	3.00
ITI1100	DIGITAL SYSTEMS I		A+	3.00
ITI1121	INTRODUCTION TO COMPUTING II		A+	3.00
MAT1348	DISCRETE MATH FOR COMPUTING		A+	3.00
CGPA	9.9			
		2020, Summer		
SEG2901	WORK TERM I		P	3.00
CGPA	9.9			
		2020, Fall		
CEG2136	COMPUTER ARCHITECTURE I		A+	3.00
CSI2510	STRUCT DE DONNÉES ET ALGO		A+	3.00
CSI2772	CONCEPTS PROGRAMMATION C++		A+	3.00
MAT2377	PROB. & STATS. FOR ENGINEERS		A+	3.00
SEG2105	INTRO TO SOFTWARE ENGINEERING		A	3.00
CGPA	9.87			
		2021, Winter		
SEG3901	WORK TERM II		P	3.00
CGPA	9.87			
		2021, Summer		
CEG3585	COMM DONNÉES ET RÉSEAUTAGE		A+	3.00
CSI3131	OPERATING SYSTEMS		A+	3.00
SEG3103	SOFTWARE QUALITY ASSURANCE		A+	3.00
SEG3125	ANAL. & DESIGN USER INTERFACES		A+	3.00
CGPA	9.89			
		2021, Fall		
SEG3902	WORK TERM III			3.00
CGPA	9.89			

2022, Winter

CSI2101	DISCRETE STRUCTURES	3.00
CSI2132	DATABASES I	3.00
CSI2520	PARADIGMES DE PROGRAMMATION	3.00
SEG2106	SOFTWARE CONSTRUCTION	3.00
SEG2911	SOFTWARE ENGINEERING	3.00
CGPA		

------- End of course list -------

Legend

Grades

10=A+	9=A	8=A-	7=B+	6=B	5=C+	4=C	3=D+	2=D	1=E	0=F

Symbols

()= Credits not granted	*= Excluded from average	ABS= Absence
ADD= Additional to requirements	AUD= Auditrice/auditor	CR= Credit
CTN= Continuing	DFR= deferred	DNW= See: ABS
DR= Dropped	H= Honours	HP= Out-of-program
EIN= Failure/Incomplete	NC= No credit	NNR= Not available
NS= Unsatisfactory	P= Pass	S= Satisfactory
SCO= Insufficient credits		