RAMBOD AZIMI

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Driven software engineering graduate from **McGill** University, with a CGPA of **3.67**/4, specializing in **backend** development, **data analysis**, and the development of **AI-powered** software solutions. Currently working at **MILA** and **McGill** on several impactful projects ranging from data analysis to ML models. Proficient in Python, Java, C, Flask, TensorFlow, Pandas, and more. Previously interned twice at **Ericsson** as a Network Engineer Intern and IT Intern at **Walter Surface Technologies**.

EXPERIENCE

RESEARCH ASSOCIATE

MILA – Quebec AI Institute | Professor Samira Ebrahimi Kahou

APRIL 2024 – PRESENT

Built an AI-agent for automatic evaluation of excavator operators and integrating them LLM to answer questions using the simulator's documentation. Researched various LLM fine-tuning approaches, including (PEFT), knowledge distillation, Adapters, and LoRA.

RESEARCH ASSISTANT

McGill University – Department of Electrical and Computer Engineering | Professor Mutchumaru Maheswaran

May 2024 – PRESENT

Conducted research on real-time Object Tracking using SOTA models (e.g., YOLO) and integrated Google Maps APIs for pixel-to-world coordinate conversion. Explored NLP techniques to enhance scene understanding and collision detection in LLMs with visualization cues.

RESEARCH ASSISTANT

McGill University – Department of Electrical and Computer Engineering | Professor Odile Liboiron-Ladouceur

SEPTEMBER 2023 – PRESENT

Conducted research on manufacturing of integrated photonic ICs using ML approaches. Developed several CNN models such as U-Net, SegNet, EfficientNetB7, DeepLab V3+, and PSP Net and improved the accuracy of the model by using an ensemble of multiple architectures.

INFORMATION TECHNOLOGY INTERN

Walter Surface Technologies | Point-Claire, Canada

MAY 2023 – AUGUST 2023

Developed an AI-powered automation software, encompassing projects such as Form Recognizer, Barcode Generator, and OCR solutions. This involved conceptualizing, designing, and implementing robust algorithms to streamline various processes.

NETWORK ENGINEER INTERN

Ericsson | Ottawa, Canada

MAY 2022 – AUGUST 2022

Performed data validation processes on RF networks, ensuring their accuracy, integrity, and optimal performance. Played role in maintaining the quality and reliability of the networks by analyzing and verifying data,

IT ASSISTANT (PART-TIME)

McGill University | Montreal, Canada

SEPTEMBER 2020 – APRIL 2024

Collaborated with professors and employers to analyze class performance metrics and facilitating data-driven insights.

SKILLS

Programming Languages: Python, Java, C/C++/CUDA, C#, OCaml, SQL, Assembly X86/AMD, HTML/CSS, Bash, Swift, MATLAB, JS
AI & Data: TenserFlow, PyTorch, Pandas, Scikit-Learn, NumPy, CVM, NLP, CNN, RNN, Transformers, Image Segmentation, PowerBI
Infrastructure: AWS, Azure, Git, Gitlab, Jira, Bitbucket, Linux, Unix, OS, DevOps
Back-end: Java, SpringBoot, Python, Flask, SQL, REST, Django, Ruby, PostgreSQL, Event-Driven Architecture, UML/ER Modelling
Front-end: Javascript, React, HTML5, CSS, HTTP, SEO, Vue.JS
QA Testing: Junit, Selenium, pytest, Postman, Cucumber, CI/CD
Certifications: TEAMS Award (McGill), Advanced Learning Algorithms (Stanford), Supervised ML (Stanford), AR/ARCore (Google)

EDUCATION

BACHELOR OF SOFTWARE ENGINEERING

McGill University

SEPTEMBER 2020 – MAY 2024

Relevant Coursework: Algorithms and Data Structures, Database Systems, Programming Langs, Software Requirements, Signals and Networks, OS, Artificial Intelligence, Computer Vision, Parallel Computing, Model-Based Programming, Software Validation
GPA: 3.67/4

PROJECTS

WEEKLY MEAL PLANNER | GITHUB

Developed a full weekly meal planner app called Gourmet Guru! The app utilizes Flask for the backend, React for the frontend, and PostgreSQL for the database server.
Technical Skills: Python, Flask, PostgreSQL, Unit Testing, Gherkin Scenarios, React, DBeaver, UML.

DASHCAM OBJECT TRACKING SYSTEM | GITHUB

Used ML to detect and count the number of cars and pedestrians and distinguished between parked and moving cars.
Technical Skills: Python, YOLOv8n, cv2, Ultralytics, NumPy.

OPERATING SYSTEM SIMULATION | GITHUB

Built the OS shell in C with support of multiple command, scheduling algorithms (AGING, SJF), multithreading, and memory management.
Technical Skills: C, Multithreading, Scheduling, Demand paging algorithms, Resource Management.

RELIABLE NETWORK DESIGN | GITHUB

Developed a Python program that designs a network with optimal network reliability within a specified cost limit. Used 2 algorithms to find the maximum reliability: Exhaustive Search and Efficient Search using Kruskal's Algorithm.
Technical Skills: Python, Graph Theory, Sorting Algorithms, GUI.

ARENA TICKETING SYSTEM | GITHUB

Developed a Java program that utilizes a DB2 database system and JDBC for online ticket purchasing. It allows users to add events, register users, purchase tickets, add sponsors to events, and perform basic analytics.
Technical Skills: JAVA, DB2, SQL Query, JDBC, CLI, GUI.

CLIMB SAFE | GITHUB

Developed a Java program designed to manage members, data organization, and administration using MVC pattern.
Technical Skills: Java/FX, JUnit, MVC, Persistence Layer, UML, Java SceneBuilder, Git, CI/CD, Agile development, Figma.

GROCERY STORE

Developed a web interface and an Android application written in Java. Built the backend using RESTful service calls and frontend using Android Studio, Vue.js, and CSS.
Technical Skills: Java, CSS, HTML, RESTful service, Git, Project backlog, UML, ORM technology hibernate, SpringBoot, Gradle, CI/CD, JUnit, Vue.js, Android SDK.

AI GAME AGENT | GITHUB

Developed a turn-based Game-playing AI agent using Best-First Search with Multiple Heuristics. Adapted the algorithm to efficiently navigate evolving board states within single-turn constraints.
Technical Skills: Python, AI Search Tree, Heuristic Search