Greta Ru-Mei Zu

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WORK EXPERIENCE

Machine Learning Internship - Ericsson (May 2025 - December 2025)

- Creating and onboarding *Retrieval Augmented Generation (RAG)* solutions and processing/inference pipelines using AWS and AWS Bedrock services
- Using LLM and agentic workflows to generate datasets for fine-tuning

Notetaker (Data Science course) - McGill University (January 2024 - May 2025)

RESEARCH PROJECTS

Machine Learning algorithms and energy efficiency - with Professor Balmau & Professor Kemme from the McGill DISC Lab (June 2025 - August 2025)

- Using CodeCarbon to instrument Switch-Transformers and Qwen *Mixture of Experts* models running on frameworks (DeepSpeed/FastMoE) and exploring solutions to train models more efficiently in terms of energy consumption.

TikTok algorithm analysis - with Professor Vybihal (Sep 2024 - Dec 2024)

- Overcoming web scraping data barriers from TikTok using bots and bypassing biases from the algorithm. Analyzing the data to see the different treatment towards user gender, food negative/positive contents and the biases.

PROJECTS

Artificial Intelligence Agent (Nov 2023 - Dec 2023)

- Develop an agent to play against another player in a game of Colosseum Survival. Using techniques such as *Monte Carlo Tree Search*, *A* Search* and *heuristics* to efficiently make decisions and win against any opponent.

Paxos Total Order Game (Nov 2024 - Dec 2024)

- Using Paxos Consensus Algorithm to implement total order for a distributed systems game.

Travel Agency Management System (Jan 2024 - May 2024)

- Develop an application for a travelling agency, to book flights, hotels or rent cars. Created relational schemas, E/R diagrams, *SQL* queries and *JDBC (Java)* to provide a *database* and functions to navigate and use it.

Compiler Design project (Jan 2025 - May 2025)

- Design and create a compiler for Mini-C (a subset of the C) using Java.

SOC-cessful Schedule (Nov 2024 - Jan 2025)

- Full-stack web development project *(XAMPP, HTML/CSS/Javascript/PHP/ SQLite3)* creating a booking tool for school staff and students.

McWics Hackathon project - BCV (2025)

- Develop a full-stack web-app *(React*, *Drizzle*, *Postgresql)* that generates a CV with most relevant experience using a job description and Gemini API call.

Codejam14 Hackathon project - MealMates (2024)

- Develop a full-stack mobile app *(React-Native*, *Django-rest*, *SQLite)* for users to swipe through food images from restaurants and match with friends.

EDUCATION

McGill University, Montreal QC
Bachelor of Science
Computer Science
(August 2022 - Ongoing)
GPA: 3.85 out of 4.0

Marianopolis College, Montreal QC
DCS in Honours Health Science
(August 2020 - June 2022)
R-Score: 37.825

TECHNICAL SKILLS

Languages:

- Java, C/C++, Python, Bash, Assembly, SQL, Javascript, PHP, OCaml

Technologies:

- Database systems, Frontend (HTML, CSS), Backend(REST, Node.js), Distributed systems (TCP, Zookeeper), CLI/Shell scripting, AWS, Git, Docker, OOP

Relevant Courses:

- Algorithm and Data Structures
- Artificial Intelligence
- Machine Learning
- Software Systems
- Software Design
- Operating Systems
- Algorithm Design
- Database Systems
- Data Science
- Principles of Web Development
- Distributed Systems
- Compiler Design

LANGUAGES

- English (Fluent)
- French (Fluent)