# 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
- Comparing and evaluation RAG solutions

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

**Corrector (Physics lab) - Marianopolis College** (August 2022 - June 2023)

## PROJECTS

**Artificial Intelligence agent** (Nov 2023 - Dec 2023)

- Develop an agent that can win 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.

**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.

**Travel Agency Management System** (Feb 2024 - Jan 2025)

- 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.

**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.

**Calendar/Reminder app personal project** (July 2024 - Present)

- Develop an iOs Calendar and ToDo list application using *SwuitUI* and XCode.

## RESEARCH PROJECT

**Machine Learning algorithms and energy efficiency - with Professor Balmau & Professor Kemme** (June 2025 - August 2025)

- Using CodeCarbon to instrument Switch-Transformers and Qwen *Mixture of Experts* models running on different frameworks such as DeepSpeed and 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.

## 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)