Adam Al-Attrach

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EDUCATION

McGill University

Bachelor of Arts in Computer Science, Minor in Statistics

Sept. 2021 - Dec. 2025 (Expected)

Montreal QC, Canada

Duchelor of Arts in Computer Science, Minor in Statistic

TECHNICAL SKILLS

Languages: C++, Java, Python, C, JavaScript, HTML/CSS, OCaml, TypeScript, JavaScript, R

Frameworks: React, Next.js, Node.js, Flask, Material-UI, Bootstrap, TailwindCSS, Express.js, Playwright

Developer Tools: Git, Bash, Github, Docker, Terraform

EXPERIENCE

Fullstack Developer

June 2024 - August 2024

McGill University

Montreal QC, Canada

- Designed and built a web application to serve as a hub for SDSDS CREATE (Sustainable Data Systems for Data Science), using **Next.js**, **Tailwind CSS** and **Framer Motion.** for Dr. Bettina Kemme
- Streamlined content management, improving the efficiency of adding, removing, and updating team members, events, companies, and other entities with the use of **Sanity Content Management System**

Software Developer Intern

Sept. 2023 - April 2024

Montreal QC, Canada

Coveo

- Designed and implemented scalable cloud infrastructure using **Terraform**, leveraging **Amazon S3** for efficient storage of automated testing dashboards hosted on **CloudFront**
- Leveraged **GitHub Actions** and **Angular** to develop a real-time dashboard, providing comprehensive insights into the outcomes of tests conducted within the last 30 days, allowing teams to tailor it to their own projects requirements
- Led a project to implement automated end-to-end tests in **Playwright** allowing an increase in quality of critical user journeys and functionality of web applications

PROJECTS

CHIP-8 Emulator $\mid C++$

- Emulated the CHIP-8 system, implementing a monochrome display
- Implemented an 8-bit stack pointer, sound timer, and delay timer, along with 16 input keys
- Developed functionalities for loading ROMs, fonts, and opcode instruction handling
- Utilized a function pointer table for opcode decoding and executed the fetch-decode-execute cycle

C Compiler | Java, MIPS Assembly

- Developed a compiler for a subset of C, supporting pointers, recursion, structs, and memory allocation
- Implemented a Parser, Abstract Syntax Tree + Semantic Analyzer, Code Generator, and Register Allocator
- Generated MIPS assembly code executable in a simulator, enabling compiled C programs to run on a RISC architecture

Emotion.ly | Flask, React, TailwindCSS, Python NLTK, Spotify API

- Built a web application that generates a music playlist based on emotions obtained from user input
- Leveraged a natural language processing library to map text input to emotions for a customized experience

LEADERSHIP AND EXTRACURRICULARS

Website Lead

Jan. 2023 - August 2023

Code Jam

- Developed a Full-Stack application in **React Typescript** with eye catching user friendly styling with **Bootstrap**
- Worked on user registration and team creation endpoints in Express.js and Sequelize
- Performed code reviews on peers' work and conducted weekly meetings