

Sam Mobed

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EDUCATION

McGill University

Bachelor of Arts in Computer Science, Minor in Statistics; GPA: 3.50/4.00

Montréal, QC, Canada

Sept. 2021 - Dec. 2024

EXPERIENCE

High Performance Computing Solutions Intern

Shared Services Canada

January 2023 – Present

Montréal, QC, Canada

- Developed and implemented **Python and Bash scripts** to automate monitoring and maintenance operations for hundreds of nodes across diverse clusters.
- Optimized log data management and analysis by implementing the **ELK Stack** to collect, ingest, and visualize scheduler-generated logs, facilitating comprehensive insights into system operations and performance.
- Employed **Telegraf, Elasticsearch, and Kibana** to gather and visualize heat and energy metrics from cluster nodes, effectively enhancing heat management processes through streamlined data visualization.

Head of Web Design ([GitHub](#))

McGill Iranian Student Association

April 2023 – Present

Montréal, QC, Canada

- Designed and developed the organization's official website, ensuring a seamless user experience and visual appeal.
- Implemented a robust **Content Management System (CMS)** to facilitate effortless updates and content management, bolstered by **internationalization** to make the site available in multiple languages.

Used: Next.js, TypeScript, TailwindCSS, Framer Motion, Sanity.io

Incident Coordination Intern

Shared Services Canada

June 2022 – December 2022

Montréal, QC, Canada

- Handled technical incidents by analyzing and classifying incoming tickets and proactively engaging the appropriate response teams for prompt resolution.
- Managed ongoing incidents, archived tickets and conducted in-depth evaluations of IT processes to identify areas for improvement.

Sponsorship Coordinator

HackMcGill's McHacks, McGill University

May 2022 – February 2023

Montréal, QC, Canada

- Networked with businesses and community organizations, conducting engaging and informative sales presentations to prospective sponsors, carefully evaluating their specific needs to then offer the most suitable sponsorship packages.

PROJECTS

MusiCLI ([GitHub](#)) | *Python, Spotify API, Apple Music API*

August 2023

- Designed a **Command Line Interface (CLI)** for streamlined import of playlists from Spotify or Apple Music, optimizing efficiency and eliminating tedious manual work.
- Automated conversion of imported data into **Excel or CSV formats**, enhancing user convenience and enabling effortless data analysis and diverse applications.
- Incorporated **dual functionality**: users can also upload Excel/CSV files to create or enhance playlists, ensuring versatile and user-friendly music management.

Realtime Encrypted Chatroom ([GitHub](#)) | *Javascript, Node.js, Express.js, EJS, MongoDB, Docker*

May 2023

- Developed a full stack app where users can signup and create chatrooms with other users, and all communication is secured with the implementation of **crystals-kyber**, a post-quantum key exchange protocol and **AES** encryption.
- Implemented real-time communication between the server and clients using **socket.io** & enhanced security by adding user authentication using **JWTs** while also securely storing passwords and logs through bcrypt hashing.
- Containerized the application through **Docker** and deployed it on **AWS**, ensuring high accessibility and scalability.

Emotion Based Playlist Generator ([GitHub](#)) | *React, Flask, Spotify API, Python NLTK*

December 2022

- Developed a web app that generates a personalized music playlist based on emotions conveyed in user text input; built as part of the McGill CodeJam Hackathon in collaboration with three other participants.

TECHNICAL SKILLS

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

Technologies: Next.js, React, Node.js, Express.js, Git, AWS, Docker