Sam Mobed

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EDUCATION

McGill University

Montréal, QC, Canada

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

Sept. 2021 - Dec. 2024

EXPERIENCE

High Performance Computing Solutions Intern

January 2023 – August 2023

Shared Services Canada

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)

April 2023 - Present

McGill Iranian Student Association

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

June 2022 – December 2022

Shared Services Canada

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.

EXTRACURRICULARS

Sponsorship Coordinator

May 2022 - February 2023

HackMcGill's McHacks, McGill University

Montréal, QC, Canada

- Networked with businesses and community organizations, **conducting engaging and informative** sales presentations to prospective sponsors.
- Organized and **delivered exhibits** during booth presentations at various events, showcasing our club's offerings and effectively **communicating** its value proposition to the public.

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.

Projects

MusiCLI (GitHub) | Python, Flask, Spotify API

August 2023

- Designed a **Command Line Interface** (CLI) for streamlined import of playlists and albums from Spotify, 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.

TECHNICAL SKILLS

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

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