

# AKASH SHARMA

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## EDUCATION

### McMaster University

Sept 2020 – May 2024 (Expected)

Bachelor of Engineering in Computer Engineering, Co-op | **3.7/4.0 Cumulative GPA**

- Dean's Honours List, McMaster Honours Award

## EXPERIENCE

### McMaster Start Coding

Oct 2021 - Present

Web Developer

Hamilton, Ontario

- Modernized the front-end for the McMaster Start Coding website to enhance user experience and attract **100+** new users
- Monitored task distribution within an **Agile environment** using **Jira team managed boards** to increase work efficiency
- Implemented **Bootstrap** features to improve the **Google Lighthouse** accessibility score by **60%** across different pages
- Optimized **JavaScript** code to improve website performance by **20%** and automated tasks using **Mongo Atlas Cloud**

### Google Developer Student Club

Sept 2020 – Apr 2021

Full Stack Team Member

Hamilton, Ontario

- Communicated with a team of 5 full-stack engineers to discuss ideas for full-stack projects such as utilizing the Google Map API to create an app that displays the location of inputted coordinates
- Executed full-stack events that introduced full-stack development to **100+** programmers through tutorials and projects

## PROJECTS

### Meal Idea Generator 🐙

- Developed a full-stack web application to help users conveniently generate meal ideas on a daily basis
- Built a **REST API** back-end with **Express**, **Node** and **MongoDB** with **Mongoose** to add **CRUD** functionality to the app
- Sent HTTP requests using **Axios** to connect client with server and used **Postman** to perform **100+** API tests during development
- Constructed a **React** front-end with **React Router** for client side routing and **Bootstrap** to generate simple stylized elements
- Created an authorization system with **bcrypt.js** and **JWT Authentication** to increase user security and protect 2 routes

### Gym Registration Bot 🐙

- Developed an automatic bot using **Python** and **Google Cloud Platform** to book optimal time slots at the school gym
- Implemented a **Selenium** script to initiate an instance of Chrome that interacts with the elements of the web page to navigate through the website and **book a time slot in less than 10 seconds**
- Hosted the app on the **Google Cloud Platform** via a **Docker Container** and **Google Cloud Run** to reduce energy costs by **95%**
- Applied **Cron Jobs** and the **Google Cloud Scheduler** to schedule the program to execute automatically at 6:30 AM every other morning, increasing number of booked sessions per month by **65%**

### Connect 4 🐙

- Led a team of 3 software developers to deploy a Connect 4 application using **Java**, allowing 2 users to play a game of Connect 4
- Incorporated **Object Oriented Programming** practices to create a player and chip class that stored data for the 2 players and each of the chips on the board, increasing scalability of the codebase
- Designed a user interface using the Java API **2D Graphics** to build flexible and efficient game components to display to the user

### CHIP-8 Emulator 🐙

- Designed a CHIP-8 emulator using **C++** with the **Sample DirectMedia Layer** library to emulate and play CHIP-8 ROMs locally
- Handled **34** Opcodes to instruct the CPU and tested the emulator post-development with **10+** ROMs to ensure functionality

## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript, HTML/CSS, C, C++, Matlab, R

**Libraries and Frameworks:** Node.js, Express, React, Selenium, Tailwind, Bootstrap, Material-UI

**Developer Tools:** Git, GitHub, Google Cloud Platform, MongoDB, Postman, Netlify, Heroku