

# Saqib Khan

(+1)289-783-1055 | khans416@mcmaster.ca | linkedin.saqib-khan | https://github.com/saqib-21 | notion.so/SaqibKhan

## EDUCATION

McMaster University - Bachelor of Software Engineering - 3.7 GPA

Expected April 2027

Relevant Courses - Application of Machine Learning, Software Development, Data Structures and Algorithms, Discrete Math, Software Architecture, Object-Oriented Programming

## SKILLS

**Programming Languages:** Java, C, C++, Python, JavaScript, TypeScript, Bash, MATLAB, Verilog, MySQL

**Web & Frameworks:** React, Tailwind CSS, HTML5, CSS3, Node.js, Express, Flask, OpenCV, MediaPipe, Pytorch, Tensorflow, Next.js

**Tools & Software:** GitHub, Linux, Maven, Autodesk Inventor, Ansys, Quartus, Quanser, Office 365

## LEADERSHIP EXPERIENCE

Sumobot - Software Engineer

August 2025-Present

- **Led a 50+** student workshop on programming fundamentals, **teaching core C++ and robotics applications**.
- Engineered autonomous robot control software in **C++**, enabling adaptive, real-time responses to opponents using **multi-sensor input**.
- **Integrated Arduino, Ultrasonic, and Infrared sensors** to gather and process input data, cleaning and storing it for use in decision-making systems.
- **Coordinated a sub-team of 4+** programmers, overseeing project timelines, contributing code, and providing technical support during competitions.

## PROJECTS

Live Bridge Status Visualizer | React, Node.js, Express, Cheerio, Google Maps API, Tailwind CSS

July 2025

- Built a **full-stack web app** with a **Node.js/Express** backend that scrapes official bridge data and exposes it via a **REST API**.
- Designed a responsive **Google Maps frontend** with real-time geolocation and color-coded bridge markers.
- Implemented server-side caching and modular JavaScript (**OOP + SOLID**) for performance and maintainability.
- Solves a real commuting problem: over **1000+ local residents** rely on it to avoid delays from raised bridges, helping the community travel more efficiently.

NeuroVision - Brain Tumor Classifier | Python, PyTorch, Next.js, TypeScript, Tailwind CSS

December 2025

- Built a full-stack medical imaging app that classifies brain tumors from MRI scans using a custom PyTorch CNN, achieving **93-100% accuracy** per class on **22,000+ scans**.
- Engineered a deep learning model with 4 convolutional blocks, batch normalization, and dropout regularization, trained on **18,000+** images with comprehensive data augmentation.
- Developed a responsive Next.js web application with real-time image upload and Python backend integration for seamless model inference.

Autonomous Rescue Drone | Java, JUnit, OOP Design Principles

April 2025

- Engineered a **Java-based state machine navigation** system that enabled drones to autonomously locate stranded individuals and identify safe landing zones with **100% success** in disaster terrain simulations.
- Applied **OOP design principles** to ensure scalability and maintainability under real-world drone and stakeholder constraints.
- Built and tested with **JUnit**, validating core navigation and safety-critical functions.

Deltahacks XI - LiftEZ – Workout Tracker | Python, Flask, OpenCV, MediaPipe, HTML, CSS

January 2025

- Used **OpenCV & MediaPipe** for real-time form correction and rep counting.
- Built a **Flask web app** for workout logging and progress tracking.
- Implemented angle detection algorithms to analyze joint positions achieving **>95%** accuracy, ensuring accurate rep tracking.

## WORK EXPERIENCE

Server - Provided attentive service at weddings and ceremonies for over 200+ guests

May 2022- August 2023

## AWARDS

- McMaster Deans' Honour List (2024), McMaster Engineering Award Of Excellence (2023), Schulich Nomine (2023), Ontario High-School Scholar (2023), High-School Council Award (2023)