Sohaib Kaidali

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EDUCATION

McGill University — Montreal, QC
B.Eng. in Computer Engineering — *Aug. 2025 – Dec. 2028*

PROFESSIONAL EXPERIENCE

MotionCorrect, Inc. — Remote
Junior Software Development Consultant — *Jun. 2022 – Present*

- Developed and maintained full-stack, cross-browser extensions (Chrome MV3/Firefox MV2), using Rust for backend logic and performant, vanilla JavaScript for data-driven, interactive frontends.
- Reduced CI/CD build times by over 80% (2 hrs to 20 mins) by optimizing build caching, parallelizing jobs, and refactoring complex deployment scripts for Windows, macOS, and Linux.
- Increased development velocity and reliability by automating Git workflows and conducting detailed code reviews, helping in reducing post-deployment bugs in a remote-first environment.

Vanier College — Montreal, QC
Mechanics Laboratory Assistant — *Aug. 2023 – Dec 2023*

- Mentored 30+ students per semester in mechanics labs, improving comprehension of core concepts by developing structured problem-solving frameworks and troubleshooting technical challenges.

FIRST Robotics Team 3986 - Express-O — Montreal, QC
Captain, Pilot, and Lead Developer — *Jan. 2020 – Jun. 2022*

- Engineered an advanced motor control system with PID and feedforward control, achieving a 20% precision boost, high stability, and responsive control under variable loads.
- Deployed a robust computer vision localization pipeline using OpenCV to fuse camera data with odometry, enhancing real-time navigation accuracy for reliable execution of complex autonomous maneuvers.
- Led team to victory in the 2023 Montreal Regional Championship, qualifying for the FIRST World Championship.
- Secured annual $5,000 grant from the Montreal Mayor's Office and earned the Fusion Jeunesse Leaders MTL Scholarship ($2,000) for leadership in advancing STEM education.

SELECTED PROJECTS

Hackathon Achievements | Devpost 3× First Place & 2× Podium Finishes in collaborative, rapid prototyping events

Heart Disease Prediction Model | GitHub — *Python, Scikit-learn, ONNX, Data Science*

- Led end-to-end data science research using statistical techniques and machine learning to build a predictive model (logistic regression); solved class imbalance and deployed it for client-side inference with ONNX.

GPU-Accelerated Network Simulation | GitHub — *Java, OpenGL, GLSL, Compute Shaders*

- Created a real-time, agent-based simulation of emergent behavior, parallelized on the GPU with compute shaders to procedurally generate bio-inspired networks for pathfinding and statistical analysis.

Rubber Duck Sumo Robot | GitHub — *C++, ESP32, PID, I^2C, ToF Sensors*

- Built an autonomous robot with a 5-ToF sensor array and dynamic, fault-tolerant I^2C bus-recovery, feeding a robust, PID-controlled finite state machine (FSM) that achieved 1.7 m/s pushes.

Sign Atlas: Deep Learning for ASL | GitHub — *Next.js, TensorFlow.js, MediaPipe*

- Won 1st place at DawHacks by building an AI tutor that uses a custom deep learning model (MediaPipe) for real-time gesture recognition, creating an interactive learning feedback loop.

TECHNICAL SKILLS

Languages: Python, C/C++, Rust, Java, JavaScript/TypeScript, Shell, GLSL, SQL

AI & Data Science: Machine Learning, Deep Learning, Modeling, Scikit-learn, TensorFlow, PyTorch, Pandas, XAI

Software & Robotics: Git, Docker, CI/CD, REST APIs, Web Sockets, Databases, ROS2, Unity, PID Control, ESP32, I^2C