

# Samir Sharma

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## EDUCATION

### University of Waterloo

Honours CO-OP Faculty of Mathematics

Waterloo, ON, Canada

Sep. 2024 – May 2029

### John G. Diefenbaker High School

STUCO President

Calgary, AB, Canada

Sep. 2021 – June 2024

## EXPERIENCE

### Software Engineering Intern

Quickly

June 2024 – Sep. 2024

Calgary, AB, Canada

- Engineered and optimized cutting-edge features for the Quickly platform, enhancing user experience and backend performance.
- Collaborated with a cross-functional team to resolve critical bugs swiftly.
- Conducted code reviews and developed innovative internal tools and documentation.
- Authored API documentation and developed validation systems using Yup.

### Minecraft Server Programmer

Online Server

Sep. 2021 – June 2023

- Architected and developed a high-performance Minecraft server with 5,000 concurrent players and 30,000+ unique players.
- Created and maintained custom plugins, ensuring seamless gameplay and robust server management.
- Integrated external APIs to automate reward systems, boosting player engagement and satisfaction.
- Raised \$6,000 for Ukrainian aid by developing and managing a donation website and store.

### Peer Programming Tutor/Developer

John G. Diefenbaker High School

Sep. 2023 – June 2024

Calgary, AB, Canada

- Designed and implemented the school's leadership website with a user-friendly interface.
- Mentored students in HTML, CSS, and React, fostering a collaborative learning environment.
- Presented to the Calgary Board of Education on integrating programming into the curriculum.

## PROJECTS

### ML Tennis Analysis System | Python, YOLO, PyTorch, OpenCV

June 2023 – Nov. 2023

- Developed a system to detect and track players and tennis balls in video footage using YOLO.
- Implemented a model to detect key points of the tennis court for player position and ball in/out calls.
- Trained CNNs to enhance detection accuracy and performance for fast-moving tennis balls.
- Used PyTorch for model training and OpenCV for video processing and visualization.

### JS Full Stack AI app | Huggingface, Docker, AWS, Next.js

Feb. 2024 – May 2024

- Developed a web application enabling users to perform object detection on uploaded images using ONNX models on Hugging Face.
- Packaged the application in a Docker image and deployed it on AWS ECS and ECR.
- Implemented image upload functionality and integrated it with a custom API for object detection.
- Utilized Next.js for front-end development, enhancing user experience.

## TECHNICAL SKILLS

**Languages:** HTML/CSS Python, C++/, JavaScript, TypeScript, CUDA, GO, SQL, Java, LaTeX (what this resume is written in)

**Frameworks/Libraries:** MongoDB, MySQL, SQLite, Microsoft SQL Server, Docker, Git, Bash, GitHub

**Databases/Tools:** MongoDB, MySQL, SQLite, Microsoft SQL Server, Docker, Git, Bash, GitHub