

# Tanvir Sarao

[tanvirsarao.com](https://tanvirsarao.com)

[tsarao@uwaterloo.ca](mailto:tsarao@uwaterloo.ca)

289-623-6233

[linkedin.com/in/tanvir-sarao](https://linkedin.com/in/tanvir-sarao)

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, TypeScript, HTML, CSS, C, Racket

**Technologies:** MySQL, PostgreSQL, Django, MongoDB, Mongoose, Express, Node, Next, React, Tailwind

**Developer Tools:** Git, Amazon Web Services, Linux, Jupyter Notebook, VS Code, Figma, Postman, SDLC, CI/CD

## EDUCATION

**University of Waterloo**

*BCFM, Double Major in Computer Science & Finance*

Waterloo, ON

*Expected April 2029*

## EXPERIENCE

**Software Engineer**

November 2024 – Present

*Hackathons Canada* 🌐

*Waterloo, ON*

- Collaborated with a team of **5+ engineers** to build Canada's largest hackathon community of **2,400+ hackers**
- Engineered **GeoDjango** integration within the database to store & manage geospatial data, including hackathon locations as lat-long coordinates using **PostgreSQL** for 50+ upcoming hackthons
- Designed & deployed filtering endpoints using **MVC architecture** to retrieve hackathons within the user's specified distance, ensuring **schema consistency** & integrating with a **CI/CD pipeline** to streamline updates

**Junior Software Engineer**

August 2024 – October 2024

*AgentEdge Inc* 🌐

*Brampton, ON*

- Collaborated with lead engineers to support a **CRM/CMS** platform for **20+** real estate professionals in Canada
- Engineered role-based access & user session management systems using **JWT tokens & bcrypt**, while developing **RESTful API** endpoints with **Node & Express** that served content to over **85k annual visitors**
- Architected efficient **CRUD** operations for **blogging & testimonial features** using **MySQL & MongoDB**, implementing **MVC** practices to reduce code redundancy by **50%** & **optimize** delivery speed

**Project Coordinator**

July 2022 – July 2023

*Trillium Health Partners* 🌐

*Toronto, ON*

- Worked with researchers to organize & host a photovoice exhibit which exceeded **KPI targets by 31%**
- Coordinated a pool of **20+** youth for research assessment, led focus groups with **15+** speakers, & managed a subsequent in-person research exhibit attracting **300+** attendees, **\$2000** in sponsorships & **10** vendors

## PROJECTS

**[tanvirsarao.com](https://tanvirsarao.com)** 🌐 | *Next, React, Tailwind, Typescript, Ubuntu Web Server*

Jan. 2025

**TanVentures** 🌐 | *HTML, CSS, Pug, Node.js, Express.js, MongoDB, Mongoose.js, Nodemailer*

Dec. 2024

- Developed TanVentures, an online tour marketplace, by building a secure **RESTful API** with Node & Express, implementing **JWT** authentication with cookies, password **encryption**, **HTTPS & CORS** principals
- Engineered a **server-side** rendered frontend with **Pug** templating and pagination integrated with **Nodemailer** for password reset emails & developed unhandled rejection, uncaught exception & **SIGTERM** responses
- Utilized the **MongoDB Aggregation Pipeline** to generate advanced course & **user statistics**

**AI Financial Portfolio Advisor – 3rd Winner** 🌐 | *Python, PyTorch, Pandas, NumPy*

Nov. 2024

- Built **filtering pipeline** to select 24 optimal equities from **US/CAD** markets using volatility & volume metrics
- Developed a market-meet robo-advisor utilizing **LSTM neural network** with 30 hidden units & MinMaxScaler normalization, achieving **0.63%** return during test period while maintaining optimal Sharpe ratios
- Implemented statistical arbitrage strategy by engineering **multi-threaded** Monte Carlo simulation with **10,000** concurrent iterations, handling real-time currency conversions & minimizing broker fees across a \$1M portfolio

**TriplIncento – Entrepreneurial Project** 🌐 | *MySQL, Node, Express, AWS, Linux*

Oct. 2024

- Built **RESTful API architecture** integrating user rewards system with **local businesses** in my hometown
- Implemented **CORS** exceptions, **HTTPS** protocol, **JWT** authentication with password encryption, engineered responsive front-end with HTML/CSS & deployed on an **AWS EC2** instance in Linux

**Doctors on Blockchain – JamHacks 8 Winner** 🌐 | *Python, MySQL, MATLAB, NEAR*

June 2024

- Utilized **CNN deep learning** model using Python, achieving 85% accuracy in early cancer detection from microscopic tissue images, reducing diagnosis time from weeks to seconds & improving patient outcomes