

JUSTIN LAM

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Experience

WAT.ai

Machine Learning Engineer

Sep 2025 – Present

Kitchener, ON

- Developing a **deep reinforcement learning system** to train a small autonomous race car in **PyBullet** simulation before testing on real hardware.
- Using **Stable-Baselines3 (PPO, SAC)** with custom **PyTorch** models to learn steering and throttle control based on position and speed feedback.
- Expanding the **PyBullet simulation** with sensors and collision detection to better match real driving conditions and measure how well each model performs.

K2 Consulting

Software Developer Intern

Aug 2025 – Present

Remote / Contract

- Built components of a large-scale venue management platform that automates supplier order processing and reduces manual data entry for chefs and event coordinators.
- Developed an **AI-assisted CSV ingestion pipeline** using the **Gemini API** to intelligently parse and categorize ingredient lists from supplier exports, improving data normalization accuracy across thousands of entries.
- Implemented **inventory tracking** and order history analysis, providing event managers real-time visibility into stock levels and supplier performance.

Projects

GlazingGorillaGames | *React, ExpressJS, Gemini API*

- Managed **9+ Roblox** titles with **37M+ plays**, **300K+ community members**, and **115M+ video views**, generating **\$100K+ in revenue**.
- Designed and deployed a **responsive landing site** showcasing the studio's portfolio, optimized for SEO and fast load times.
- Built a **Gemini AI-powered dashboard** that aggregates KPIs across multiple Roblox titles, visualizes play counts, revenue trends, and retention, and enables users to query real-time metrics through a **LangChain-integrated chatbot**.

Level | *Next.js, FastAPI, Python, React, Cohere API, Gemini API*

- Developed an **AI fairness visualization platform** that detects and rebalances bias in organizational datasets by grouping applicant data and visualizing relationships with **interactive Bezier curves**.
- Integrated **Cohere embeddings** and the **Gemini API** to interpret textual data and generate semantic similarity clusters, enabling explainable bias detection.
- Implemented a **FastAPI backend** to process and validate uploaded datasets, compute text embeddings via Cohere's API, and expose asynchronous REST endpoints for real-time visualization updates.

Education

University of Waterloo

Geological Engineering, Honours, Co-operative Program

Sep. 2025 – May 2030

Kitchener, ON

Queen's University

Bachelor of Applied Science in Computer Engineering (Transferred after first year)

Sep. 2024 – April 2025

Kingston, ON

Technical Skills

Languages: Python, Java, C, JavaScript, TypeScript, SQL, HTML, CSS, MATLAB, Bash

Frameworks & Libraries: React, Next.js, Express.js, Node.js, FastAPI, Flask, Tailwind CSS, D3.js, Recharts, Three.js, NumPy, Pandas, PyTorch, TensorFlow, OpenCV

Databases & Tools: MongoDB, PostgreSQL, MySQL, Prisma, Supabase, Docker, Git, GitHub, REST APIs, Auth0, Vercel, Firebase, AWS (EC2, S3)