

Daniel W Liu

Computer Science and Finance Student

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EDUCATION

University of Waterloo <i>Double Major in Computer Science and Finance</i> <i>Bachelor of Computing and Financial Management (Co-op)</i> — GPA: 4.0/4.0	Sept 2025 – Present Waterloo, ON
International Baccalaureate Diploma Programme <i>IB Diploma</i> — <i>45/45 Perfect Score</i> — <i>Top 0.5% Worldwide</i>	Sept 2021 – May 2025 Thornhill, ON

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, Java, SQL, HTML/CSS, Racket
Frameworks: React.js, Next.js, Node.js, Express.js, Tailwind CSS, Bootstrap
Libraries: Three.js, pandas, NumPy, OpenCV, Matplotlib, yFinance, PyQt5
Cloud, Services & Tools: AWS, MongoDB, Firebase, Google Cloud, Git, GitHub, Blender, Unity

EXPERIENCE

Incoming Software Engineering Intern <i>Wedge (YC S25 healthcare AI startup)</i> <ul style="list-style-type: none">Incoming intern building agentic AI to automate healthcare back-office workflows across healthcare organizations.	Dec 2025 – Present San Francisco, CA (Remote)
Fullstack and Events Intern <i>HOSA Canada</i> <ul style="list-style-type: none">Engineered a full-stack educational resource sharing platform using Next.js, React.js, and MongoDB, serving 7,000+ Canadian students to compete against 50+ associations including those from China and the US.Automated content moderation by integrating OpenAI's Moderation API, processing 175+ pdfs/minute with real-time content classification and queue system to maintain performance during peak loads.Implemented authentication and role-based access systems with NextAuth.js to manage roles and permissions across Canada's largest health care competition, supporting 35+ unique competitive events.	Sept 2025 – Dec 2025 Toronto, ON
Computer Vision and ML Developer Intern <i>Pearl Lab Holland Bloorview Kids Rehabilitation Hospital</i> <ul style="list-style-type: none">Developed real-time object detection system using OpenCV and pupil-apriltags for <i>Bootle Blast</i>, a gamified rehabilitation platform tested at 3+ Canadian hospitals for children's motor skill development.Conducted data analysis using NumPy and pandas to evaluate detection methods, selecting and refining optimal algorithms that improved model confidence by 200%.Benchmarked YOLOv8 model against alternative models through rigorous testing, creating a diverse dataset of 250+ annotated scenes to validate real-world applicability.	Jul 2025 – Aug 2025 Toronto, ON

PROJECTS

rainbolt.ai <i>Next.js, Three.js, FastAPI, OpenAI CLIP, Pinecone, LangChain, Google Cloud</i> <ul style="list-style-type: none">Awarded Best UI Hack at UofT Hack the Valley X as frontend lead, developing an AI-powered platform with Next.js, Three.js, and Zustand, creating interactive dashboards and 3D renders for location identificationArchitected a RAG pipeline using a dataset of 955,199+ images, integrating OpenAI CLIP, Pinecone, LangChain, and Mapillary API for accurate location recognition and context generation.Deployed a scalable backend on Google Cloud using FastAPI and Firebase, with Auth0 for secure authentication.	<i>Devpost</i> <i>GitHub</i>
Curve Guard <i>MongoDB, Express.js, React.js, Node.js, AWS, Three.js, MediaPipe</i> <ul style="list-style-type: none">Orchestrated a MERN posture monitoring system with real-time MediaPipe pose detection (33 landmarks), RESTful APIs, and MongoDB-backed analytics achieving 95% posture detection accuracy.Constructed a responsive React.js and Three.js frontend with dynamic visualization and alerts, reducing posture errors by 40% through real-time correction across 3 key metrics: head tilt, shoulder unevenness and slouch.Implemented Node.js/Express services and deployed backend infrastructure on AWS with Vercel-hosted frontend.	<i>GitHub</i>
Brawl Board <i>Next.js, MongoDB, WebSockets, AWS, Clerk</i> <ul style="list-style-type: none">Developed a real-time collaborative whiteboard using Next.js with WebSocket connections and MongoDB database, supporting strategy planning for 3+ popular games with live team coordination.Deployed the application on Vercel with AWS backend services and Clerk authentication, supporting 1000+ game assets with seamless real-time synchronization and drag-and-drop interactions.	<i>GitHub</i>