

Victoria Liu

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EDUCATION

University of Waterloo

Master of Engineering in Electrical and Computer Engineering

Sept 2024 - Aug 2025

Xinjiang University

Bachelor of Engineering in Software Engineering

Sept 2019 - Jun 2023

Bachelor of Science in Statistics

Sept 2019 - Jun 2023

- Valedictorian National Scholarship of China AI/ML Research Assistant, Shandong University

WORK EXPERIENCE

Fullstack AI Developer, [ShallPass.ai](#), Toronto, Ontario

AI-native platform to help learners efficiently learn and practice for exams.

Dec 2024 – Present

- Designed and implemented multi-modal AI pipelines for a coaching platform, integrating pose estimation, motion analysis models, and feedback generation into a 4-stage architecture.
- Developed full-stack video processing system, orchestrating AI inference workflows in Node.js/Express with Replicate API, FFmpeg, and cloud deployment.
- Built a chatbot based recommendation system for personalized suggestions. Leveraging both heuristic-based and ML-driven decisions.

TSLA Trading Agent (freelance)

Sep 2025 - Present

LLM based trading-agent with customized sentiment quantifier

- Learned and customized the [TauricResearch/TradingAgents](#) multi-LLM framework (analyst/researcher/trader/risk roles) for Tesla. Integrated Alpha Vantage (via MCP) and yfinance vendors, tuned deep/quick-think models, and customized sentiment quantifier to drive trade signals.
- Replicated the [FinSentLLM](#) algorithm by assembling an expert LLM panel (XgBoost, Logistic Regression, etc.) and a compact meta-classifier over structured semantic signals. Validated gains on Financial PhraseBank/FNSPID sentiment sets.
- Combined frameworks to propose and execute experiments with robust backtesting and live forward testing.

Hackathon Logistics Manager (volunteer), [Brave Career](#), Toronto, Ontario

Aug 2025 – Present

- Coordinated hackathon logistics at the University of Waterloo, managing venue setup, scheduling, and cross-team communication while serving as the primary contact for participants and mentors.
- Resolved on-site challenges with composure and collaborated with diverse stakeholders to ensure a positive, engaging experience for participants.

Project Leader, Xinjiang University, China

Science and Technology Innovation Incubator

Feb 2021 - Jun 2022

- Conducted **ML/DL** research on counterfactual causal reasoning for visual recognition, integrating causal inference into neural network models to reduce spurious correlations and improve interpretability, robustness.
- Recruited and led a research team focused on creating an emergency assistance application utilizing VR simulations
- Performed comprehensive quality assurance checking and testing of team members' work
- Investigated subject literature and wrote two academic papers summarizing the research findings of both applications

RESEARCH & PROJECTS

AI-Powered Snowboard Customizer | 2nd Place at AI Hackathon

Sep 2025

- Designed an AI-based web application that allows users to create personalized snowboard designs and generate a 3D video preview showing themselves performing tricks to highlight the board's bottom design, using the NanoBanana model (image generation) and Seedance-1 Pro model (image-to-video synthesis).
- Awarded 2nd place at the AI Hackathon: Make Impacts with Replicate ([official announcement](#)), recognizing the project's innovation and technical execution.

Artificial Intelligence Medical Emergency System (AIMES)

Apr 2021 - Oct 2022

- Created and designed the concept of an emergency assistance system using both artificial intelligence and a virtual reality training simulator
- Programmed Python algorithm of the application to trigger multiple cell phone functionalities including calling, text messaging, camera/microphone, and location sharing to assist individuals experiencing a medical emergency
- Registered two patents relating to the proprietary concepts in AIMES

SKILLS

Programming & Development: Python, JavaScript, TypeScript, SQL, Java, C++

Frameworks & Tools: React, Node.js, NextJS, Vercel, Supabase, Firebase, Spring Boot, Angular,

Cloud & DevOps: Google Cloud Platform (Cloud Functions, Firestore, Hosting), AWS (EC2, S3), CI/CD pipelines, Docker, Kubernetes

Machine Learning & AI: LangGraph, LangChain, LangSmith, LLM, Prompt Management, Context Engineering, Scikit-learn, TensorFlow, model training & deployment

Other: ETL pipelines, Data Analysis, RESTful API, Scrum, Agile