

KEVIN YUAN

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SKILLS

Languages: C, C++, C#, Python, Java, MATLAB, SQL, JavaScript, TypeScript

Machine Learning: TensorFlow, Keras, PyTorch, Scikit-learn

Tools & Frameworks: Terraform, Linux, Docker, Azure, Git, CI/CD, Jupyter, React, Node, Flask

Relevant Courses: Abstract Data Types & Algorithms, Intro to Software Engineering, Database Management Systems

EXPERIENCE

Software Engineer Intern

May 2025 – Dec. 2025

MDA Space Ltd.

Brampton, ON

- Built a **data analysis platform** for CAD design validation, improving visualization, debugging, and engineering conclusions for Canadarm3-related workflows
- Restored **AI pipeline reliability** by updating outdated Python/C++ pipeline code after design-system changes, reducing recurring workflow instabilities
- Trained and integrated **AI/ML model components** into automation workflows, improving engineer-facing analysis
- Pitched & prototyped a **pipeline redesign** integrating AI optimization methods across systems, resulting in a projected **90% efficiency increase**

Data Analyst Intern

May 2024 – Dec. 2024

Transport Canada

Ottawa, ON

- Built a **Terraform automation generator** that scanned cloud database records, identified required updates, and produced Azure-ready infrastructure code, **reducing 95% of manual work**
- Improved database synchronization across **cloud-hosted databases** by detecting new, outdated, and missing records to support safer ingestion updates
- Configured Azure resources and **DevOps pipeline workflows** to support reliable cloud database update operations

Technical Support Intern

Jun. 2023 – Sep. 2023

Dr. Xiao Qing Li Medicine Professional Corporation

Richmond Hill, ON

- Built a **web/SMS chatbot** using OpenAI, Python, and third-party APIs to support FAQs, appointment booking, and client inquiries
- Used client feedback to refine chatbot prompts, appointment-booking flows, and response accuracy, projecting receptionist **workload reduction by 40%**
- Integrated **website and backend automation** for client-facing tools & internal support processes

PROJECTS

Multi-Layered AI Trading & Portfolio Risk Automation Platform

Mar. 2025 – Present

Python, PyTorch, TensorFlow, C#, SQL, Docker

- Built a **multi-layered AI trading system** combining predictive modeling, reinforcement learning, quantitative risk rules, and server-client automation for portfolio-level signal generation
- Trained a **CNN model** on 10+ years of financial futures data with **35+ engineered features**, integrating 12+ strategy signals, VIX, SPY/QQQ options IV, and Black-Scholes expected moves
- Used **Proximal Policy Optimization** to compare CNN forecasts against current market conditions, learning when to take or reject trade signals
- Optimized portfolio risk allocation with genetic algorithms, using **risk-adjusted exposure** targets across Kelly-inspired sizing, Monte Carlo simulations, and regime-based constraints
- Centralized model inference through a **server-client architecture**, enabling scalable signal distribution across multiple client workflows

EDUCATION

Carleton University

Ottawa, ON

Honours Bachelor of Computer Science (Co-op) A.I & Machine Learning Stream

Sep. 2022 – Apr. 2027

- Fourth year standing | 11.4/12.0 CGPA – 3.7/ 4.0 GPA
- Carleton University Entrance Scholarship 2022