Jonathan (Yukang) Wen

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Education

University of Toronto, MSc in Applied Computing — Sep 2025 – Dec 2026

- **Coursework:** Neural Networks, Database Management System, Blockchain Technologies

University of Toronto, BASc in Computer Engineering — Sep 2020 – May 2025

- GPA: 3.89/4.0
- **Coursework:** Machine Learning, Operating Systems, Distributed Systems, Stochastic Calculus (grad–level)
- **Awards:** Dean's List for all semesters; University of Toronto Excellence Award (UTEA); Wallberg Scholarship; Scrymgeour Scholarship in Engineering Entrepreneurship

Research Experience

ML Researcher, Stanford Trustworthy AI Research – Remote — Apr 2025 – Present

- Factor Models for Reliable and Efficient AI Evaluation (Co-first author)
  Topics: AI Benchmarks, Item Response Theory
  Submitted ICLR'26
  Invited talks: STAIR 2025
- Gathering Context that Supports Decisions via Entropy Search with LLM (Co-first author)
  Topics: generative models, LLM Inference and Reasoning
  Tools and skills: vLLM, CUDA, wandb, PyTorch, LLama-Factory LoRA Finetuning, distributed training
  Invited talks: Toronto AI Safety Seminar 2025, SAAL 2025, EXAIT@ICML 2025, NYRL 2025

ML Researcher, Department of Statistical Sciences – Toronto, ON — Nov 2024 – Apr 2025

- Developed Deep Learning methods using Stochastic Differential Equation Neural Networks (Neural SDE) to generate stock option implied volatility surface using PyTorch and Python

ML Researcher, Finhub, Rotman School of Management – Toronto, ON — Apr 2024 – Apr 2025

- Built a platform for archiving and retrieving 10-year historical StockTwits data and trained various models on it including Transformer models, Random Forests and unsupervised learning via Pytorch and Scikit-learn

Work Experience

Quant Trading Researcher, Royal Bank of Canada, Capital Markets – Toronto, ON — May 2023 – Aug 2024

- Researched and launched two high-frequency trading strategies for equity market making with kdb+/q and Python at the largest Central Risk Book desk in Canada
- Pioneered a systematic trading strategy to provide liquidity to the RBC CM algorithmic trading desk, utilizing Pandas/NumPy for regression analytics and hypothesis testing, contributing to a 10% desk profit
- Published internal weekly reports for the firm to understand recent trends in retail trading flow, provided insights to cash equity traders, and enhanced cross-desk collaboration
- Engineered a unified back-testing algorithm adopted across the team using Cython (C++ & Python), streamlining the process of back-testing strategies and supporting parallel computing, reducing back-testing time by 90%

Skills & Interests

Languages & Frameworks Python, C++, C, SQL, kdb+/q, PyTorch, scikit–learn, CUDA, vLLM, wandb

Other Language Mandarin

Tools: Wandb, vLLM, AWS, Google Cloud, Linux, Git

Certificates: CQF (Certificate in Quantitative Finance), Advanced SAS