

# Jonathan (Yukang) Wen

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## Education

- University of Toronto**, MSc in Applied Computing Science Sep 2025 – Dec 2026
- **Coursework:** Neural Networks, Database Management System, Blockchain Technologies
- University of Toronto**, BS in Computer Science 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  
*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