

YICHEN JI

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EDUCATION

University of Toronto Ph.D. in Statistics Advisors: Radu Craiu and Monica Alexander Awards: Doctoral Recruitment Award	Sep 2024 - Present
University of Chicago M.S. in Statistics Thesis Advisors: Dacheng Xiu and Per Mykland Awards: 25% Merit-based Tuition Scholarship	Sep 2022 - Jun 2024
University of Toronto B.S. (Hons) in Statistics & Applied Mathematics GPA: 3.87/4.0 Awards: Summer Undergraduate Research Award (SURA), Dean's List (all semesters)	Sep 2018 - Jun 2022

RESEARCH EXPERIENCE

Booth School of Business, University of Chicago <i>Supervised by Prof. Dacheng Xiu</i>	Chicago, IL
Project: Continuous-Time Fama-MacBeth Regressions	Sep 2023 - May 2024
<ul style="list-style-type: none">· Collected and pre-processed intraday futures data across five asset classes over twenty years.· Replicated five key risk factors from the literature and constructed their intraday factor portfolios according to the proposed methodology, which provided new empirical evidence beyond the U.S. equity market to futures markets that distinguishes the significance of continuous and jump risk premia.	
Thesis Project: Large-Scale Realized Volatility Prediction with Machine Learning	Oct 2022 - May 2024
<ul style="list-style-type: none">· Systematized an end-to-end ML pipeline for forecasting realized volatility (RV) in U.S. stocks using one-minute intraday data over ten thousand stocks spanning more than two decades.· Implemented and evaluated the predictive accuracy of fifteen econometric and machine learning models by out-of-sample R^2 and $QLIKE$ objectives.	
Learning Behavioral Multi-armed Bandit Policies <i>Supervised by Prof. Ningyuan Chen</i>	Toronto, Canada
Rotman School of Management, University of Toronto	Jun 2023 - Sep 2023
<ul style="list-style-type: none">· Developed a numerical optimization algorithm for maximum likelihood estimation in Softmax models, and applied the proposed method to lab experiment data.	
High-Frequency Jump Detection <i>Supervised by Prof. Per Mykland</i>	Chicago, IL
Department of Statistics, University of Chicago	Mar 2023 - Sep 2023
<ul style="list-style-type: none">· Conducted an extensive literature review on jump tests, jump regression, pre-averaging, and Lasso variants.· Performed Monte Carlo comparison between ten price jump tests by evaluating their size and power under various sampling frequencies, volatility persistence, and microstructure noise conditions; revealed significant disparities in jump number and timing identification in identical datasets.	
Bayesian Analysis of Normalizing Flows via Importance Sampling <i>Supervised by Prof. Scott Schwartz</i>	Toronto, Canada
Department of Statistical Sciences, University of Toronto	May 2022 - Jul 2022

- Proposed a Bayesian learning model employing normalizing flows neural networks based on SWA-Gaussian (SWAG) and likelihood re-weighting for uncertainty quantification.
- Gave a departmental talk on the methodology and experiment results on regression and 2D density estimation.

TEACHING EXPERIENCE

TA, University of Toronto <i>STA414/2104: Statistical Methods for Machine Learning II</i>	Jan 2025 - Apr 2025, Jan 2026 - Apr 2026
TA, University of Toronto <i>STA355: Theory of Statistical Practice</i>	Sep 2025 - Dec 2025
TA, University of Toronto <i>STA237: Probability, Statistics and Data Analysis I</i>	Sep 2024 - Dec 2024
TA, University of Chicago <i>Applications of Hierarchical Linear Models in Longitudinal and Multilevel Research (Graduate)</i>	Apr 2024 - Jun 2024
Grader, University of Chicago <i>Multivariate Statistical Analysis (Graduate)</i>	Apr 2024 - Jun 2024
TA, University of Chicago Booth School of Business <i>Big Data (Undergraduate)</i>	Jan 2024 - Mar 2024
TA, University of Chicago <i>Introduction to Statistical Methods in Economics (Undergraduate)</i>	Jan 2024 - Mar 2024
Grader, University of Chicago <i>Statistical Theory and Methods 1a (Graduate)</i>	Sep 2023 - Dec 2023
Grader, University of Chicago <i>Statistical Models and Methods 1 (Undergraduate)</i>	Apr 2023 - Jun 2023
TA, University of Toronto <i>Calculus with Proofs (Undergraduate)</i>	Sep 2021 - Apr 2022

DEPARTMENTAL SERVICE

Member of Local Organizing Committee, The Fast and Curious II: MCMC in Action Conference, Department of Statistical Sciences, University of Toronto	2025
Dean's Student Advisory Committee, Physical Science Division, University of Chicago	2023
Advisory Chair Search Committee, Department of Statistical Sciences, University of Toronto	2022
UTQAP Cyclical Program Review, Department of Mathematics, University of Toronto	2022

PROFESSIONAL EXPERIENCE

China International Capital Corporation (CICC) <i>Quantitative Research Intern</i>	Jul 2022 - Sep 2022 Shanghai, China
China Alliance of Social Value Investment (CASVI) <i>ESG Research Intern</i>	Jun 2021 - Aug 2021 Shenzhen, China

COMPUTER SKILLS & OTHERS

Programming	Python, R, MATLAB, SQL, Stan, Bash
Python	PyTorch, Keras, Sklearn, NumPy, SciPy, Pandas
Interests	Photography (UofT Varsity Videographer), Basketball (UChicago CSSA Team Player)