YUE (RAY) HU

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EDUCATION

Expected 12/23	**NEW YORK UNIVERSITY**	New York, NY

The Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance
- *Expected Coursework:* object-oriented programming (Java), unsupervised learning, time series analysis, Monte Carlo, derivatives pricing, Fourier analysis, Black-Scholes, stochastic calculus

09/17 - 04/22	**UNIVERSITY OF WATERLOO**	Waterloo, Canada

B.Math. in Mathematical Finance
- *Coursework:* linear algebra, partial differential equations, Itô's lemma, real analysis, Bayesian statistics, CAPM, WACC, options, data structure (Python), stochastic processes, linear regression
- *Honors:* Dean's Honors (top 5% of GPA in department), President's Scholarship

EXPERIENCE

03/22 - 04/22	**CITIC SECURITIES**	Shenzhen, China (remote)

Equity Research Analyst Intern
- Analyzed target companies' financial statements and industries' business cycles and future trends
- Made predictions in new-generation education industry (e.g., AI and new vocational learning)

09/21 - 12/21	**AVIVA CANADA**	
(2nd largest property and casualty insurance company in Canada)		Toronto, Canada

Actuarial Intern, Group and High Net Worth
- Provided actuarial pricing for high-net-worth clients with properties valued at more than $50M
- Developed credit analysis for insurance brokers to determine whether to apply more risk factors
- Improved efficiency of pricing tools built in Excel by 30% through automation and optimization
- Consolidated group case database, with over 10K observations and 500K features, in Python
- Drafted tier analysis for top corporate entities; prepared and presented rate adjustment strategies

09/20 - 12/20	**GORE MUTUAL INSURANCE COMPANY**	
(Oldest property and casualty insurance company in Canada)		Cambridge, Canada

Actuarial Analyst, Actuarial Transformation and Operations
- Revamped rating structure model to transform actuarial pricing process from flat to multi-stage
- Renovated data retrieving process with SQL and VBA; improved data flow efficiency by 40%
- Created reconciliation calculator to fit new modeling structure that replaced old pricing process
- Developed calculator for underwriting in Excel for privately-owned automobiles in Ontario

PROJECTS

08/21 - 10/21	**ARTIFICIAL INTELLIGENCE FINANCE INSTITUTE (AIFI)**	New York, NY

Impact of COVID-19 on Perth Housing Prices: A Machine Learning Perspective (Python)
- Conducted statistical analysis and model validation with TensorFlow and scikit-learn
- Identified several new and original parameters after testing hundreds of transformed ones
- Applied CatBoost regression for price forecasting, and difference-in-difference (DID) methods for impact evaluation
- Wrote manuscript (independently) that was published by 7th International Conference on Financial Innovation and Economic Development (2022)

01/21 - 04/21	**UNIVERSITY OF WATERLOO**	Waterloo, Canada

Applications of Multi-Layer Perceptrons on Time Series Forecasting (R)
- Examined real-life applications using MLPs, a class of feedforward artificial neural network
- Forecasted annual lynx trappings in Canada using efficient ADAM optimization algorithm

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python, Java, MATLAB, SQL, R, C#
Languages: English (fluent), Mandarin (native)
Interest: China Flight Simulation Competition (4th place out of 1K+)