Alice (Zhiwei) Liu

EDUCATION

Rotman School of Management & Department of Economics, University of Toronto Toronto, Ontario
Master of Financial Economics *Expected June 2026*
- **Award:** MFE Graduate Scholarship ($8,000)
- **Upcoming Relevant Courses:** Financial Economics; Corporate Financing II; Options and Futures; Econometrics; Macroeconomics

Department of Mathematics, University of Waterloo Waterloo, Ontario
Bachelor of Mathematics (Major in Financial Analysis and Risk Management - CFA specialization) *Sep 2019 – Jun 2024*
- **Academics**: cGPA 3.9/4.0
- **Awards:** Graduated with Distinction**;** President's Scholarship of Distinction; Math/ELAS Scholarship
- **Relevant Courses:** Investment Science and Corporate Finance (A+), Fixed Income Securities (A+), Derivatives (A)

INDUSTRY CERTIFICATIONS

Bloomberg Market Concepts (2023); FRM Level I (2022); SAS 9 Base & Advanced Programmer (2020)

PROFESSIONAL EXPERIENCE

TD Securities Toronto, Ontario
Global Market Intern (Global Equity Derivative) *Sep 2023 – Dec 2023*
- Developed VBA scripts to automate daily overnight funding processes to support liquidity management
- Built financial models in Excel to provide daily equity swaps settlement advisory and analyze payment discrepancies
- Reconciled 50 - 70 daily interest rate swap payments across TD's systems for the Structured Notes desk to ensure data accuracy

Solactive AG (German Index Engineering Firm) Toronto, Ontario
Fixed Income Index Analyst *May 2023 – Aug 2023*
- Automated indices' monthly rebalancing with SQL by selecting qualified bonds and recapping bonds' weight in the Index composition
- Examined indices parameters and analyzed market activities (Corporate Actions, New issuances, etc.) to verify index return plausibility
- Retrieved bond's data real-time data from Reuters Terminal, Moody's and S&P to Excel for bond rating validation

TD Wealth Toronto, Ontario
Private Banking Credit Solutions Intern *Sep 2022 – Dec 2022*
- Completed Annual and Interim Reviews for high-net-worth clients (PNW over $13MM, Credit Size over $5MM)
- Provided customized loan restructure solutions to high-net-worth clients by utilizing diverse collateral options such as ABS
- Performed Borrower and Credit Risk Rating by analyzing clients' financial situations to finalize loan renewals and launch new deals

TD Toronto, Ontario
Retail Risk Model Development Intern *Jan 2022 – Apr 2022*
- Optimized Collection Recovery Model in Python using a linear regression model to improve runtime efficiency by 10%
- Implemented back-testing, cross-validation and regularization to resolve the overfitting problem and curse of dimension of the model

Travelers Toronto, Ontario
Actuarial Intern *May 2021 – Aug 2021*
- Reconciled and reviewed monthly Auto premium and loss claim data from IBM Cognos Analytics
- Created Excel Macro to produce opportune monthly reports for further P&L analysis, increasing efficiency by 50%

EXTRACURRICULAR ACTIVITIES

2023 UWFA Trading Competition

- Ranked among the Top 10 candidates with a 20% weekly return by constructing a diversified portfolio with equities and derivatives
- Analyzed company historical data and financial ratios to refine asset allocation strategies including increased exposure to technology company stocks and the incorporation of alternative investments (e.g. REITs)

Credit Default Spread Project
- Conducted background research on the airline industry to select the appropriate derivative for AMR Corporation
- Identified mispricing of Credit Default Swap (CDS) by calculating spread levels using Reduced Form and Structural Form methods
- Optimized the respective CDS pricing methodologies in Python, improving pricing accuracy by 30%

EXTRACURRICULAR ACTIVITIES

- **Technical Skills**: Proficient in Python (Pandas; NumPy), Excel, SQL, R, VBA, Tableau, Power BI, Bloomberg, Matlab
- **Languages:** English, Mandarin
- **Interests:** Avid Mahjong player, Jazz dancing, Boxing, Badminton