Julian Schady

Julian.schady@mail.utoronto.ca – (705)-933-6547 – linkedin.com/in/julian-schady-270bab1ba

SKILLS SUMMARY

- Analytical and detail-oriented graduate student with a strong foundation in data science, financial engineering, machine learning, and quantitative finance.
- Experienced in building predictive models, developing end-to-end data pipelines, conducting large-scale financial simulations, and applying quantitative methods such as option pricing, financial risk modeling, and portfolio optimization.
- **Coding Languages & Technical Tools:** Python, C++, R, SQL, MATLAB, AXIS, Excel, Power BI, HTML

EDUCATION

Candidate, Master of Financial Insurance   **2025 – Expected 2026**
University of Toronto, Statistical Sciences
Relevant Courses: Life Insurance Mathematics, Stochastic Calculus for Mathematical Finance, Data Science for Risk Management

Bachelor of Applied Science in Engineering Science   **2020 – 2024**
Major in Engineering Mathematics, Statistics, and Finance, Minor in Artificial Intelligence Engineering
University of Toronto

ACTUARIAL EXAMS

SOA Exam Probability   **Passed May 2025**
SOA Exam Financial Mathematics   **Passed June 2025**

EXPERIENCE

U of T Centre for Management of Technology & Entrepreneurship   **September 2023 – June 2024**
Undergraduate Researcher
- Completed a fourth-year undergraduate thesis about utilizing reinforcement learning to hedge a financial derivative called an Autocallable Note and received a final mark of 93%.
- Developed a deep reinforcement learning model using the deep deterministic policy gradient algorithm to delta and gamma hedge auto-callable notes.
- The Loss distribution of the final model had a standard deviation 10% lower than that of the baseline hedging model.

TD Bank   **May 2022 – September 2022**
Business Systems Analyst Intern
- Led the implementation of the Dynatrace monitoring system for the payment platform by drafting 20+ change requests and coordinating a comprehensive validation process.
- Consolidated and verified validation feedback from product owners, software engineers, and QA teams, strengthening cross-functional communication and ensuring accuracy of all change requests.
- Analyzed payment platform timeout incidents and developed a Power BI dashboard to visualize trends, contributing to a reduction in recurring system issues.

Oxford Learning Don Mills, Tutor   **September 2024 – September 2025**

PROJECTS

Fourth Year Capstone Project – Automated Personal Investing Software with Asset Class Allocation
- Developed an automated personal investment website with asset allocation into equity, bonds, cash, and real estate.
- Utilized user preferences and historical data to construct a minimized risk investment portfolio.
- The backend utilized financial portfolio optimization techniques such as mean-variance and CVaR optimization.
- The optimization strategy resulted in a portfolio that outperformed the baseline ETF by 3% on historical data.

American Put Option Valuation
- Implemented two numerical frameworks for valuing American put options, the Cox–Ross–Rubinstein (CRR) binomial tree model and a variational inequality (PDE) formulation, verifying stability and correctness through cross-model comparison.
- Computed and analyzed the time-dependent early-exercise boundary, quantifying its sensitivity to key market parameters including volatility and interest rate and documenting how these shifts affect optimal stopping behaviour.
- Simulated 10,000 stochastic price paths to study the distribution of Profit & Loss (P&L) under optimal stopping times τ. Evaluated Delta-hedging strategies across multiple exercise scenarios, highlighting risk exposures.