Kenrick Raymond So

kenrick.so@student.ateneo.edu | kenrickraymond.github.io | linkedin.com/in/kenrickraymond

Education

Ateneo de Manila University,   Jun 2024 - May 2025
Master in Applied Mathematics Major in Mathematical Finance

- GPA: 3.57/4.0
- **Coursework:** Stochastic Calculus I & II, Statistical Learning, Advance Probability and Martingales, Financial Derivatives I & II, Financial Risk Management I & II

Ateneo de Manila University,   Aug 2020 - May 2024
BS Applied Mathematics with Specialization in Mathematical Finance

- GPA: 3.5/4.0, *Cum Laude*
- **Coursework:** PDE, ODE, Scientific Computing I & II, Real Analysis, Advance Calculus, Time Series, Statistical Analysis, Financial Mathematics I & II

Publication

So, K.R., Cruz, S.C., Marcella, E.A., Briones, J., and Garces, L.P.D. (2025). Uncertainty in Pricing and Risk Measurement of Survivor Contracts. *Risks* 13(2), 35. https://doi.org/10.3390/risks13020035

Research Experience

Tax Fraud Detection Using Machine Learning   Dec 2024 - May 2025

- Developed efficient machine learning algorithms for the Philippine Bureau of Internal Revenue to assign probabilities of companies committing tax fraud
- Integrated and analyzed large datasets of company financial statements and tax filings to detect irregularities

Financial Time Series Forecasting with Machine Learning   Aug 2024 - Dec 2024

- Implemented a feature engineering pipeline using Python, Pandas, and LightGBM to calculate rolling statistics, z-scores, and seasonal decompositions.
- Utilized principal component analysis to identify key factors for alpha generation and conducted backtesting to evaluate the strategy's robustness

Fitting an Affine Term Structure Model Using the Kalman Filter [GitHub]   May 2024 - Aug 2024

- Calibrated a Cox-Ingersoll-Ross model for interest rate dynamics using the Kalman filter to estimate parameters and improve accuracy

Uncertainty in Pricing and Risk Measurement of Survivor Contracts [GitHub]   Jan 2023 - Jun 2024

- Investigated the impact of various model assumptions to the valuation and risk measurement of contracts linked to the survival rate of a population.
- Accepted for presentation at ICoAIMS 2025; later withdrawn following acceptance in *Risks* to prioritize journal dissemination.

Optimal Portfolio Selection Problem for Power Utility Function [GitHub]   Aug 2022 - Jan 2023

- Applied a numerical scheme that used central differencing to determine the optimal portfolio weights between a risky and a risk-free asset that maximizes the terminal wealth of an investor

Optimal Stopping Problem for Pairs Trading Under Jump Diffusion [GitHub]   Sep 2021 - Jul 2022
(Mentored under Dr. Len Garces)

- Implemented numerical methods to determine the optimal exit strategy for a pairs trading portfolio that minimizes the risk of adverse losses under the assumption that the price process exhibits jumps

Work Experience

Graduate Assistant, Department of Mathematics – Ateneo de Manila University   Jun 2024 - May 2025
- Awarded a full tuition waiver plus stipend for the duration of my graduate studies
- Taught tutorial sessions for mathematical analysis, R, Python, and analyzed student grade trends using Python to inform new departmental policies
- Assisted in organizing local workshops and seminars with industry partners

Actuarial Valuation Intern, Willis Towers Watson – Philippines   Jun 2023 - Sep 2023
- Prepared valuations of pension plans and retiree welfare plans through analyzing financial data to perform actuarial calculations that determine the present and future values of plan provisions
- Analyzed retirement benefit plans to determine the sustainability for employers through estimating future liabilities and assessing the impact of plan design changes

Volunteering/Extracurricular

Vice President - AIESEC in Ateneo   Sep 2020 - Feb 2023
- Handled the organization's budgeted expenses, revenue-generating initiatives, contracts, corporate sponsors, and training
- Streamlined reporting, documentation, and operations by creating templates in Word and Excel for financial statements, projects, and administrative functions
- Directed three merchandise-selling initiatives including brands such as HydroFlask, Champion, that generated ₱97,175.00, and a leadership training program that generated ₱28,150.00

Associate Vice President - Ateneo Consulting Club   Sep 2020 - Aug 2021
- Crafted and presented a report for local beverage startup that included market research, framework analysis, risk mitigation, and projected impact of their restructuring program
- Conceptualized and executed a program for a case competition with 80 participants

Other Details

Technologies: Python, R, HTML, LaTeX, Git

Languages: English (IELTS Band 8), Filipino (native), Mandarin

Writing Samples: https://kenrickraymond.github.io/portfolio/