# Kenrick Raymond So

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in kenrickraymond

Research PDFs Here

• Quezon City, Philippines



#### **Education**

Master in Applied Mathematics (Mathematical Finance), Ateneo de Manila University. GPA: 3.64/4.0

**Coursework:** Stochastic Calculus, Statistical Learning, Advanced Probability and Martingales, Financial Derivatives, Financial Risk Management.

BS Applied Mathematics (Mathematical Finance), Ateneo de Manila University. GPA: 3.5/4.0, Cum Laude

**Coursework:** PDE, ODE, Scientific Computing, Real Analysis, Advanced Calculus, Time Series, Statistical Analysis, Financial Mathematics.

### **Research Publication**

**K. R. So**, S. C. Cruz, E. A. Marcella, J. Briones, and L. P. D. Garces, "Uncertainty in pricing and risk measurement of survivor contracts," *Risks*, vol. 13, no. 2, 2025, ISSN: 2227-9091. ODI: 10.3390/risks13020035.

### **Employment History**

2024 - 2025

- **Research Intern,** Bureau of Internal Revenue Philippines.
  - Applied unsupervised models to generate pseudolabels and used supervised models to assign probabilities of companies committing tax fraud.
  - Co-authored a report on automating fraud detection using machine learning and achieved 95% out-of-sample accuracy in classifying potentially fraudulent companies.
- **Graduate Assistant,** Department of Mathematics Ateneo de Manila University.
  - · Served as a teaching assistant; developed and presented code for Python programming.
  - Analyzed student grade trends and enrollment data using Python; presented findings and wrote a report that informed curriculum planning and recruitment policy.
- Actuarial Valuation Intern, Willis Towers Watson Philippines.
  - Conducted valuations of pension and retiree welfare plans by analyzing financial data to accurately estimate present and projected values of plan obligations.
  - Evaluated the sustainability of retirement benefit plans by forecasting future liabilities and modeling the effects of potential plan design changes on financial outcomes.

## Research Experience

Fitting an Affine Term Structure Model Using the Kalman Filter.

Estimated parameters of a Cox-Ingersoll-Ross interest rate model through Kalman filtering, improving model fit to observed data.

2023 – 2024 Investigation of Pricing Survivor Contracts.

Investigated how uncertainty in forecasting mortality rates affects the valuation of life insurance contracts.

## Research Experience (continued)

2022 - 2023

Maximal Central Differencing for Optimal Portfolio Selection.

Implemented maximal central differencing to solve the Hamilton–Jacobi–Bellman PDE, improving numerical stability and accuracy in determining asset allocation.

2021 - 2022

Optimal Stopping for Pairs Trading Under Jump Diffusion.

Developed and implemented a finite difference scheme to solve a free-boundary problem, showing how jumps in prices influence risk management decisions.

## Volunteering/Extracurricular

2020 - 2023

- Vice President AIESEC in Ateneo.
  - Oversaw the organization's budget, revenue initiatives, contract management, corporate sponsorships, and training programs.
  - Streamlined operations by creating templates for financial statements and administrative tasks, and led merchandise sales and training initiatives generating over P125,000.

2020 - 2021

- Associate Vice President Ateneo Consulting Club.
  - Delivered a report for a local beverage startup, incorporating market research, strategic framework analysis, and risk mitigation recommendations.
  - Planned and led a successful case competition with 80 participants, overseeing logistics, and coordination.

### **Skills**

Languages

English (native), Filipino (proficient), Mandarin Chinese (intermediate).

Coding

Python, R, LaTeX.

Misc.

Academic research, teaching, LaTeX typesetting and publishing.

# Miscellaneous Experience

### **Awards**

2025 **Merit Scholarship**, Awarded a full tuition waiver.

Tamkang University Scholarship, Completed a four-month Chinese language program.

#### Certification

2024 **IELTS Academic**, Band 8. Certified proficiency in English language skills.