Serjin Kim

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Serjin Kim | serjinkim

Seoul, South Korea

Education

- **Massachusetts Institute of Technology** *Expected 2028*
  Master of Finance, Concentration in Financial Engineering Cambridge, MA, USA
- **Seoul National University** *Mar 2022 – Feb 2026*
  B.A. in Economics, Combined Minor in Financial Economics Seoul, South Korea
  - **Honors:** Summa Cum Laude
  - **Mathematics:** Stochastic Differential Equations, Financial Mathematics I, Linear Algebra, Differential Equations, Mathematical Analysis
  - **Econometrics & Causal Inference:** Studies in Econometrics (Graduate), Causal Inference for Data Science (Graduate), Econometrics, Applied Econometrics, Special Topics in Data Science (Graduate), Data Mining Methods and Lab
  - **Finance & Economics:** Finance Seminar and Research (Graduate), Topics in Money and Finance (Graduate), Applied Microeconomics (Graduate), Dynamic Macroeconomics, Macro Financial Economics, Macroeconomics, Microeconomics, Economics of Information

Research Interests

Quantitative Finance, Computational Finance, Causal Machine Learning, Financial Econometrics, Macro-Finance

Research Experience

- **SNU Undergraduate Research Fellowship Program** *May 2024 – Present*
  Independent Researcher (Advisor: Prof. Jaewon Choi) Seoul, South Korea
  - Engineered an LLM-based SEC EDGAR parsing pipeline to construct the first large-scale firm-quarter dataset of U.S. At-the-Market (ATM) equity offerings (2008–2024) across 50,000+ filings.
  - Documented persistent negative abnormal returns following ATM program announcements—even absent realized issuance—identifying the hidden costs of financing flexibility.
  - Distinguished opportunistic versus necessity-driven issuance motives utilizing panel fixed-effects models, overvaluation measures, and financial distress proxies.
  - Awarded Dean's Prize for Research Excellence.
- **Causality Lab, SNU Graduate School of Data Science** *Jun 2025 – Present*
  Undergraduate Research Intern (Advisor: Prof. Sanghack Lee) Seoul, South Korea
  - Investigated the failure modes of Causal Foundation Models (CFMs) and Prior-Data Fitted Networks (PFNs) under post-treatment conditioning and hidden confounding.
  - Developed methods to embed graph structures into CFMs utilizing soft/hard masking and Graphormer architectures.
  - Co-authored paper proposing computationally efficient corrections for causal structure misidentification in foundation models.
- **Afinit Industry-Academia Collaboration** *Oct 2025 – Present*
  Research Intern Seoul, South Korea
  - Engineered counterfactual evaluation frameworks for credit scoring and loan approval policies using large-scale microfinance datasets (∼1M observations).
  - Engineered an online reward function for credit modeling integrating PD (Probability of Default), LGD (Loss Given Default), and EAD (Exposure at Default), leveraging fully matured disbursement and default records.
  - Implemented Off-Policy Evaluation (OPE) and ensemble estimation methods to optimize decision-making under non-stationary macroeconomic conditions.
  - Co-authored research introducing a robust ensemble method for OPE under tail risk.

Industry Experience

- **KASA Singapore** *Jun 2024 – Dec 2024*
  Intern, Real Estate Investment Team Singapore
  - Executed financial modeling, scenario analysis, and due diligence to support institutional commercial real estate transactions.
  - Conducted market comparable valuations, rental trend analyses, and vendor-related risk assessments for rigorous investment evaluation.
  - Assisted in investment committee preparations and buyer-side negotiations alongside Singapore-based institutional investors.
- **Meritz Securities** *Jun 2023 – Aug 2023*
  Summer Analyst, Strategic Asset Management Team Seoul, South Korea
  - Evaluated flexible equity financing structures, specifically At-the-Market (ATM) offerings, as strategic alternatives to traditional CB/BW financing.
  - Analyzed macro-financial liquidity frictions within the Korean MBS market, presenting actionable findings to the Korea Capital Market Institute.
  - Investigated structural differences between US GAAP and K-IFRS loan-loss provisioning frameworks, focusing on forward-looking expected-loss methodologies.

Working Papers

[1] **The Hidden Cost of At-the-Market Offerings.** *Independent Research.*

[2] **Stablecoin, Bank Intermediation, and Fiscal Spillovers.** *Independent Research.*

[3] **A Structural View of Query Misspecification in Causal Foundation Models.** *ICML 2026 SPIGM Workshop.*

[4] **Causal Foundation Models Perform Better without Post-treatment Variables.** *Under review at ICML Workshop.*

[5] **OPERA-S: Robust Ensemble Off-Policy Evaluation under Tail Risk.** *Under review at NeurIPS.*

Awards & Honors

- **Dean's Prize for Research Excellence**, Seoul National University *2024*
- **2nd Place Research Award**, SNU Undergraduate Human Rights Research Program *2024*
- **Best Seminar Award**, Liberal Education Institute, SNU *2024*
- **Merit-Based Academic Scholarship**, Seoul National University *2022–2025*
- **Hoengseong Talent Scholarship**, Hoengseong County Government *2020–2021*

Leadership & Extracurricular Activities

- **SNU Economic Review** *Mar 2023 – Jun 2024*
  Macroeconomic Analyst Seoul, South Korea
  - Authored analytical reports evaluating the regulatory impact of short-selling bans in the Korean stock market and the role of U.S. commercial real estate in the SVB collapse.
  - Presented deep-dive research at four finance seminars, covering cryptocurrency market dynamics, China's real estate stimulus measures, and global monetary policy decoupling.
  - Led tri-weekly morning briefings on global financial news and macroeconomic indicators.
- **Seoul National University Student Ambassador** *Mar 2023 – Feb 2024*
  Session Manager Seoul, South Korea
  - Coordinated and managed official university sessions and campus tours, representing SNU to prospective students and international guests.

Technical Skills & Additional Information

- **Programming & Tools:** Python (PyTorch, Pandas), R, STATA, OpenAI API, LLM Fine-Tuning, Econometric & ML Modeling
- **Languages:** Korean (Native), English (Fluent; TOEFL 115), Mandarin Chinese (Elementary; HSK 3)
- **Interests:** Kendo athlete (National-level certification), Recreational tennis