

Se Hun Kim

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EDUCATION

The University of Chicago

Chicago, IL

M.S. in Financial Mathematics

Sept. 2023 - Dec. 2024

- Cumulative GPA: 3.91
- Relevant Coursework: Stochastic Calculus, Convex Optimization, Option Pricing, Quantitative Portfolio Management, Fixed Income Derivatives and Numerical Methods
- Assisted Professor Dacheng Xiu at Chicago Booth School of Business in developing NLP-based portfolio strategies—extracted signals from Dow Jones Newswires using BERT and a novel optimization approach, and constructed a long-short portfolio optimized for the Sharpe ratio

University College London

London, United Kingdom

M.S. in Computational Statistics and Machine Learning

Sept. 2020 - Sept. 2021

- Graduated with Distinction (highest master's degree classification)
- Relevant Coursework: PhD-level modules on Probabilistic and Unsupervised Learning, and Approximate Inference and Learning in Probabilistic Models at UCL's Gatsby Computational Neuroscience Unit
- Modeled Patient recruitment rates in clinical trials using inhomogeneous Poisson Processes with hierarchical modelling and Gaussian Processes as part of the master's degree thesis

University of Warwick

Coventry, United Kingdom

B.S. in Economics

Oct. 2015 – Jul. 2020

- First Class Honours (highest bachelor's degree classification), graduated in the top 5% of the class
- Awarded Oliver Hart Prize for academic excellence in the second year (ranked 4th out of 414 students)
- Specialization: Econometrics and Mathematical Economics

EXPERIENCE

Loomis Sayles

Chicago, United States

Quantitative Researcher – University of Chicago Project

Jul. 2024 – Sep. 2024

- Developed and implemented a CNN-based portfolio construction strategy using US equity data
- Identified and mitigated potential sources of look-ahead bias, as well as impracticalities, in the existing academic research, improving the reliability of the research findings
- Explored both 1-dimensional and 2-dimensional representations of US equity data, experimenting with various model architectures to assess strategy viability

Prime Trading

Chicago, United States

Quantitative Researcher – University of Chicago Project

Mar. 2024 – June 2024

- Developed a profitable statistical arbitrage trading strategy for commodities futures using tick data – pairs trading strategy involving Bollinger bands and moving average prices - validated through backtesting and optimized the hyperparameters of the model, such as the thresholds for stop loss, using Bayesian Optimization

UBS

London, United Kingdom

Quantitative Analyst – Forecasting and Scenario Methodologies

May 2022 – June 2023

- Researched and built conditional forecast models for interest rates products leveraging a diverse modelling techniques such as state-space models, smoothing methods, covariance calibration methods and regression models utilizing R and Python
- Developed new SOFR-based models to adapt to the new environment posed by the LIBOR transition, resolving issues related to data availability and recalibration

Republic of Korea Navy

Seoul, South Korea

Petty Officer 2nd Class

Oct. 2016 – Sept. 2018

- Served as an English linguist on a flag ship destroyer, facilitating communication during joint trainings with the US aircraft carrier strike groups

SKILLS

Programming Languages: Python (Statsmodels, Scikit-learn, PyTorch, PyStan, HuggingFace), R, C++

Knowledge: Machine Learning, Deep Learning, Convex Optimization, Bayesian Statistics, Variational Inference, Natural Language Processing, Econometrics, Time Series Analysis, Stochastic Calculus, Data Structures, Algorithms

Languages: English, Korean