Kevin Hyun Jin Kim

[email address] | [phone number] | [Address]

WORK EXPERIENCE

KOREA INVESTMENT & SECURITIES **Seoul, Korea**

Quantitative Researcher (Contract) *SEP 2024 - NOV 2024*

- Achieved **Sharpe ratios > 4.0** in backtests of a **statistical arbitrage strategy** on **Korean equities**, supporting the management of a **$5M+ portfolio**.
- Improved **portfolio risk management** by integrating **multi-factor exposures** and **regime-adjusted forecasts**, enhancing allocation robustness under changing volatility conditions.
- Automated a **financial analytics pipeline** processing over **100K+ data points daily**, increasing **analyst productivity by 30%** and reducing **manual errors** in portfolio monitoring and reporting.

QRAFT TECHNOLOGIES **Seoul, Korea**

Quantitative Researcher/Trader *AUG 2022 - OCT 2023*

- Generated **1.6% avg. monthly return** on a **$2M live U.S. equity strategy** by **building and deploying deep learning models** into a **fully automated intraday trading pipeline**.
- Facilitated **HFT development** on **KOSPI index derivatives** by researching **limit order book dynamics** using **high-frequency data** and **microstructure-based execution modeling**.
- Built and deployed a **reinforcement learning-based optimal execution engine** to institutional **OMS platforms**, facilitating **order flow automation** for leading **banks in Korea and Taiwan**.

KGT LAB **Seoul, Korea**

Junior Quantitative Researcher *SEP 2020 - JUL 2022*

- Engineered event-driven **signals** from **patent litigation and grant data**, identifying firms with **IP-related catalysts or downside risk** for **systematic short strategies**.
- Constructed **forward-looking innovation momentum factors** from **patent citation flows** and **technology reclassification trends**, used to support **long exposure to R&D-intensive sectors**.
- Developed **clustering models** on **patent embeddings** to detect **emerging technologies** and **cross-sector spillovers**, enabling **thematic basket construction** and **innovation dispersion analysis** across equities.

PROJECT

Joint Calibration for S&P 500/VIX Smile

- Reconstructed two advanced **joint calibration frameworks**—a **transport-based optimizer** and a **neural SDE model with one-factor SLV**—to align **S&P 500** and **VIX volatility surfaces**.
- Achieved accurate **multi-curve calibration** across **S&P 500 smiles**, **VIX futures**, and **VIX smiles** by designing **task-specific loss functions** and **maturity-aware constraints**.

EDUCATION

IMPERIAL COLLEGE LONDON **London, UK**

Master in Science, Mathematics *OCT 2019 - JUN 2020*

- Classification: First Class Honours
- Courses: Option Pricing, Stochastic Calculus, High Performance Computing, Machine Learning
- Dissertation: Calibration of Local Stochastic Volatility/Hybrid Models to Market Smiles via Particle Method

IMPERIAL COLLEGE LONDON **London, UK**

Bachelor in Science, Mathematics *OCT 2016 - JUN 2019*

- Classification: First Class Honours

ADDITIONAL INFORMATION

- **Programming**: Python, C++, R, MATLAB
- **Technologies:** git, bash, sql, docker, jupyter, pytorch, tensorflow, keras
- **Languages**: English (Fluent), Korean (Native), Mandarin (Intermediate)