Kehan Lu

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EDUCATION

Duke University, Fuqua School of Business — 09/2019 – 05/2025 (Expected)
PhD in Business Administration – Operations Management

- **Research Area:** Data-driven Sustainable Operations
- **Relevant Coursework:** Probabilistic Machine Learning, Theory of Inference, Data-Driven Optimization, Convex Optimization, Stochastic Comparison, Advanced Microeconomics, Dynamic Programming and Optimal Control, Revenue Management and Dynamic Pricing, Bayesian Inference

Columbia University — 09/2015 – 05/2019
B.S. in Operations Research – Financial Engineering
GPA: 3.8 / 4.0 | **SAT:** 2400

- **Honors:** Meritorious Winner, 2019 Mathematical Contest of Modeling; Gold medal, 2015 International Youth Physicists' Tournament (captain of the Chinese national team)

EXPERIENCE

CITIC Securities / CLSA Americas Holdings — **New York**
Summer Intern – Quantitative Research — *06/2023 – 08/2023*

- Independently constructed excess return prediction features for intraday U.S equity trading strategies from option trading data with a delivery frequency of 10 minutes; generated features that have strong predictability of extreme stock price movements
- Built feature quality assessment framework, including information correlation (IC), auto-correlation for turnover, and average return by groups
- Explored machine learning models, such as linear regression and deep neural network, to construct alpha signals from the features and evaluated its performance through back-tester
- Led the weekly feature brainstorming seminar and presented main findings and insights from academic research on feature engineering

Capstone Investment Advisors — **New York**
Part-time Intern – Risk Management — *02/2019 – 05/2019*

- Automated and visualized the daily update reports by extracting and cleaning data from various databases using VBA and SQL
- Conducted independent research on the optimal allocation of the firm’s different pots given their past performance using machine learning techniques

Ernst & Young — **Hong Kong**
Summer Intern – Financial Services Advisory (FSA) — *06/2017 – 08/2017*

- Analyzed telematics driving data and built a proprietary pricing model on ‘Pay How You Drive’ for Usage Based Insurance initiative project

RESEARCH / PROJECT

Data-Driven Design of Index-based Yield Protection Policy — *01/2023 – Present*

- Developed an innovative statistical learning algorithm to determine the optimal design of index-based agricultural yield protection policies; generated high-probability performance guarantees for both the base algorithm and the extended algorithm with L1 regularization (LASSO)

Index-Based Yield Protection for Smallholder Farmers — *07/2020 – 09/2023*

- Optimized the design of an innovative index-based agricultural yield protection system using game theory and comparative statics; offered insights to the governments on how to improve farmers’ welfare accordingly

Portfolio Construction Based on Multiplex Network Analysis on Corporations — *01/2018 – 09/2018*

- Designed a new portfolio risk management strategy from the perspective of multi-layer network centrality built by corporation data from FactSet

SKILLS & INTERESTS

Computer Skill: Python, Matlab, SQL, R, VBA, KDB+/Q
Leadership Experience: Global China Connection (Vice President), CU INFORMS (Committee Member)
Interests: Texas Hold’em, Fitness, Soccer, Basketball