KAI MEI

1-310-968-3924 https://github.com/kid3night kmei@andrew.cmu.edu

EDUCATION

CARNEGIE MELLON UNIVERSITY, TEPPER SCHOOL OF BUSINESS — Pittsburgh, PA
Master of Science in Computational Finance – MSCF — 12/19

UNIVERSITY OF CALIFORNIA, BERKELEY, HAAS SCHOOL OF BUSINESS — Berkeley, CA
Exchange Student ***GPA: 4.00/4.00*** — 8/16

- Finished advanced finance courses within top 10% of all classes

SICHUAN UNIVERSITY — Chengdu, China
Bachelor of Management in Accounting, Minor in Applied Math ***GPA: 3.79/4.00*** — 6/16

- Honors: SCU Undergraduates Scholarship (2013 - 2016)

COURSEWORK/SKILLS/ PROJECTS

- **Finance:** Financial Engineering Studies, Asset Pricing, Derivative Models, Behavioral Finance, Simulation Methods
- **Mathematics:** Probability Theory, Stochastic Process, PDE, Numerical Solutions of PDE, Stochastic Calculus
- **Statistics:** Linear Models, Econometrics, Multivariate Statistics, Time Series, Statistical Learning, Financial Data Science
- **Computer Science:** Data Structure and Algorithm Analysis, Database, Deep Learning, Reinforcement Learning*
- **Programming:** Python (Numpy, Pandas, Sklearn, Keras, Pytorch, CVXPY), MATLAB, C, C++, R, SQL, Latex, Kdb+/Q*
- **Technology:** Git, Linux, Docker, AWS, MySQL, GCP, MongoDB, Plotly
- **Project:** MSCF Studies in Financial Engineering
  - **Derivatives Pricing:** Developed model in Python to calibrate stochastic volatility models (Heston) and price options on volatility. Implemented Longstaff and Schwartz simulation to price an American real option on a power plant
  - **Risk and Sensitivity Analysis:** Designed and built models to analyze the real option pricing model's sensitivity to its parameters to test the robustness of the model

**denotes current & future coursework*

EXPERIENCE

BFAM PARTNERS (Multinational hedge fund with $7bn AUM) — Hong Kong
Data Scientist Intern, Equity Volatility — 6/19 - 8/19

- **Strategy Research:** Researched on global equity volatility statistical arbitrage trading strategies in options and variance swaps across US, European and Asian markets. Communicated with portfolio managers to generate, implement and back-test trading ideas. Enhanced performance of trading strategies by building predictive models to filter trades
- **Machine Learning:** Constructed, improved and maintained research pipeline to automate research workflows. Experimented on applications of reinforcement learning in volatility trading. Built CNN to predict weekly changes of volatility surface
- **Data Analysis & Visualization:** Designed and developed interactive data analysis and dynamic visualization plugin for the company's back-testing engine. Facilitated users to perform deep-dive analysis on testing results

FORESEE INVESTMENT — Shanghai, China
Quantitative Researcher Intern, Equity High Frequency — 5/18 - 12/18

- **Programming:** Developed a back-testing platform for Chinese A-Shares high-frequency trading research using Object-Oriented Programming with Python and C++
- **Data Cleaning:** Cleaned large size high-frequency (millisecond level) raw data of A-Shares (grouped by tickers, removed extraneous information, filled in missing values). Derived limit order book using these data for further feature research
- **Feature Engineering:** Extracted over 100 features using limit order book and feed data. Designed evaluation framework to select features with high predicting power. Over 40 of those features have been put into production.
- **Deep Learning:** Trained MLP and LSTM networks on GPUs with Keras and Tensorflow to generate trading signals

INSANITY TRADING — Beijing, China
Quantitative Developer/Researcher, Commodities Futures & Equity — 9/16 - 7/17

- **Feature Mining:** Developed features based on market and broker data of Chinese commodities futures with Python, feature combined performance realized half-year Sharpe ratio of 2.7 in live trading
- **Machine Learning:** Implemented machine learning algorithms in research. Used Tree-based ensemble algorithms to select and combine features. Reduced data dimension and composited non-linear indices using Autoencoders. Experimented on anomaly detection algorithms such as One-class SVM, Isolation Forest to do large drawdowns prevention
- **Python Program Development:** Modified, refined, and enriched functions of company's research platform. Optimized existing algorithms and accelerated time-consuming functions using Numba JIT compilation package and Cython

ADDITIONAL INFORMATION

- Certifications: CFA Level III Candidate, ACCA Exam Candidate: Passed 13 exams out of 14
- Volunteer Activities: 12th Fortune Global Forum volunteer. Vice-Minister of Volunteers Association of Sichuan University