SHIYANG (NEIL) NIE

125 W 109th St., Apt. 7L, New York, NY, 10025 | (646) 264-8599
sn2691@columbia.edu | www.linkedin.com/in/nieshy

EDUCATION

Columbia University New York, NY
Master of Arts in Mathematics of Finance Expected Dec. 2017

- **Coursework**: Mathematical Finance, Stochastic Calculus(**A+**), Time-Series Modeling, Hedge Fund Strategies, Programming for Computational & Quantitative Finance, Numerical Methods in Finance

Sun Yat-Sen University Guangzhou, China
Bachelor of Science in Applied Mathematics (GPA 3.8/4.0, GRE: 170/170) Sept. 2012 – Jun. 2016

- **Coursework**: Probability/Statistics, PDE, Stochastic Process, C/C++, Data Structure & Algorithm
- **Awards**: Merit-based scholarship (2%); National Second Prize (1%) in China's MCM

WORKING EXPERIENCE

Guangzhou Securities Co., Ltd. Guangzhou, China
Quantitative Research Fall Intern | Investment Management Nov. 2015 – Apr. 2016

- Constructed a database in SQL for event-driven strategies and developed stock scoring model using universe of 4083 stocks in China's OTC market based on fundamental metrics and companies' events
- Constructed portfolios based on stock scoring model and compared trading performances with NEEQ Industry Index in Python (package: pymssql, pandas, numpy, matplotlib)

Industrial Asset Management Co., Ltd. Shanghai, China
Quantitative Summer Analyst | Quantitative Investment Jul. 2015 – Aug. 2015

- Implemented and enhanced genetic-algorithm-based opening range breakout strategy using PCA in Matlab; achieved higher annualized return (~34.8%) and lower maximum drawdown (~4.3%)
- Researched and back-tested multiple trading strategies (e.g. swap spread arbitrage, commodity term structure strategy) in Python/Matlab for strategy research reports
- Built a Matlab Graphical User Interface that visualizes real-time and historical indicators (e.g. market impact cost) of portfolios to help traders identify arbitrage signals and monitor trading performances

CITIC Securities Co., Ltd. Xiamen, China
Quantitative Research Winter Intern | Investment Management Jan. 2015 – Feb. 2015

- Applied Quandl API in Python (package: pandas, quandl) to automatically scrape trading data of foreign currencies exchange rate from websites; built a database as a data source for forex-based strategies
- Back-tested forex momentum strategy in Python over different types of currencies (e.g. G10 currencies, emerging-market currencies) to compare the trading performances in different markets
- Adjusted asset allocation for forex momentum strategy dynamically; designed a VBA tool to calculate and plot P&L curve of multiple investment products

ACADEMIC EXPERIENCE

PCA-SVM Stock Selection Model (R) Apr. 2016 – May. 2016

- Applied Principal Component Analysis (PCA) to extract four principal components from fifteen financial metrics of China's A-share stocks data to achieve dimension reduction
- Built Support Vector Machine (SVM) classifier to select high-return stocks and improved the classifier by cross validation; constructed portfolios that outperform CSI 300 Index based on the classifier

Simulation-Based Asset Pricing and Monte Carlo Simulation (Matlab) Mar. 2015 – Nov. 2015

- Implemented and validated path-wise method and likelihood-ratio method to estimate Greeks for European call options in the context of Black-Scholes model
- Combined path-wise method with likelihood-ratio method to estimate Delta for binary options under multiple scenarios with different approximation functions

ACTIVITIES / SKILLS/ INTERESTS

- Computing Skills: C/C++, Matlab, R, Python, SQL, Excel/VBA, Linux/Unix, Bloomberg
- Interests and Hobbies: Piano (13 years), Enthusiastic classical music lover (13 years), Badminton (6 years)