SHAOLUN(ALAN) DU

(347) 233-5145 ■ shaolun.du@gmail.com
Web: https://alan-du.github.io./

EXPERIENCE

Advocate Capital Management

Portfolio Analyst (Feb. 2018 --- , intern included) New York, NY

- Augment and maintain in-house portfolio management system in python of pricing and risk management includes FX, Swaps, Cap/Floor and Swaption pricing as well as risk metrics calculations. (60%)
- Assist trader with live trading quote in OTC market on customized trade in FX, Swaps, Options and review after-trade reconciliation, also provide hedging suggestions to institutional clients. (30%)
- Perform scenario analysis and stress-testing on current portfolio and help automat daily workflow of python and excel. (10%)

SQI Capital (child company of SHZQ futures)

Quantitative Analyst Intern (May. 2015 --- Aug. 2015, May. 2016 --- Aug. 2016) Shanghai, China

- Monitor market major players position and market volatility to find spot-futures hedging or arbitrage opportunity based on potential large change in top 10 market players positions via python.
- Build and maintain a database for futures market and spot market with price, trading volume, open positions and exchange inventories using Wind to do data feeding.
- Build and maintain automatic trading strategies in TB-platform using narrow range break signal.

CERTIFICATIONS/AWARDS

- Passed CFA level 3 exam (Jun. 2018), Passed FRM part I, II exam (May. 2018), designation pending
- Series 3 licensed (National Commodity Futures ID: 0526023).
- Passed Ph.D qualifying exam in mathematics with all A-grades at NYU-Courant (Sep. 2017)
- Meritorious winner in CoMAP'S Mathematical Contest in Modeling (Mar. 2013)

EDUCATION

NEW YORK UNIVERSITY New York, NY
The Courant Institute of Mathematical Sciences
MS in Mathematics (Sep. 2016 – May. 2018) GPA:3.8/4.0

PURDUE UNIVERSITY West Lafayette, IN
MS in Computer Science (Sep. 2014 – Dec. 2015) GPA:3.6/4.0

SHANGHAI UNIVERSITY Shanghai, China
BS in Mathematics and Applied Mathematics (Sep. 2010 – Jul. 2014) GPA:3.6/4.0

RELEVERANT COURSEWORK: Econometrics & Portfolio risk management, Computing in Finance, Stochastic Calculus for Option Pricing, Machine learning and Deep learning, Scientific computing and Optimization,

PROJECTS

DERIVATIVES PORTFOLIO SYSTEM IN PYTHON Advocate Capital Management, LLC

- Built from scratch derivatives pricing system for in-house valuations modules include: bootstrapping yield curve for major currencies, risk metrics calculation by curve shocking approach, options pricing and Greek letters calculation by Monte-Carlo approach and Black formula approach.
- Built portfolio level risk management system on top of basic pricing engine using OOP design which is able to handle rates curve scenario analysis, FX shocking analysis and forward cash flow analysis.
- Helped institutional clients manage corporate level macro risks and mitigate forward cash flow dilemma.

RISK AND PORTFOLIO MANAGEMENT IN PYTHON New York University, NY

- Implemented portfolio construction on industrial historical data using Mean-Variance optimization.
- Combined momentum strategy with Black-Litterman model to generate estimated expected returns and PCA to estimate COV matrix.

COMPUTER SKILLS/OTHER

- Python (SCIPY, NUMPY, PANDAS, QUANTLIB) with OOP design, over four years and 50,000 lines
- SQL (Working knowledge with long queries over 100 lines)
- EXCEL (Intense using in front-end development and automation with VBA & Python programming)
- Bloombergs (Daily using on FX/Derivatives, Swaps, Options pricing and portfolio management)