SHAOLUN(ALAN) DU

(347) 233-5145 ■ shaolun.du@gmail.com

EXPERIENCE

Advocate Capital Management

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

- Augment and maintain in-house portfolio management models for market risk management purpose of large corporate client balance sheet analysis includes forward cash flow projection, rates curve sensitivity analysis, FX sensitivity analysis and customized scenario analysis (stress testing).
- Assist trader with live trading quote in derivatives market on customized deal in FX, Swaps, Call/Put options and Swaptions with Bloomberg modeling and provide after-trade reconciliation on MarkitWire.
- Perform new strategy back-testing on return-risk calculation with Python (Pandas, Numpy, QuantLib).

SHZQ Futures

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

- Monitored futures market for spot-future arbitrage signals and implemented tools in python to track top 20 position holdings of all main future contracts weekly.
- Tested range-breakthrough strategy on Chinese stock index futures IF/IC/IH with parameter optimization.

Independent Commodity Trader (Jan. 2016 ---) New York, NY

- Trade during Asian-hours in Chinese commodity market using macro-based trend following strategy.
- Manage family-owned portfolio over 3MM CNY and provide weekly perspectives and performance on personal website: https://alan-du.github.io./.

CERTIFICATIONS/AWARDS

- Passed CFA level 3 exam (Jun. 2018), Passed FRM part I, II exam (May. 2018), designation pending
- Candidate in CIPM level 2 exam, Candidate in Series 3 test.
- 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)