JUNQI (JUN) QIAN

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EDUCATION

New York University | The Courant Institute of Mathematical Sciences   **New York**
M.S. in Mathematics in Finance   2018 – 2020
- **Mathematics and Statistics**: Mathematical Analysis, Time Series Analysis, Differential Equations, Linear Regressions
- **Finance**: Econometrics, Derivative Pricing & Hedging, Financial Mathematics, CAPM, PCA, Black-Scholes Formula and Greeks, Monte Carlo, Mean-Variance Portfolio Optimization, VaR, Interest Rate & FX Modeling

University of California, Berkeley   **Berkeley**
B.A. in Mathematics   2016 – 2018
- **Relevant Courses**: Statistics and Probability, Linear Algebra, Partial Differential Equations

WORK EXPERIENCE

Spruce Investment Advisors   **Stamford, CT**
Summer Intern   July 2019 – Present
- Updated performance of portfolio and benchmarks by calculated max drawdown, sharpe ratio, capture ration etc. by Python
- Provided risk and return analysis based on mean variance approach to inform portfolio construction and risk-taking decisions

Haitong Securities   **Shanghai**
Summer ECM Intern   June 2019 – July 2019
- Implemented convertible bonds pricing model in Python to predict convertible bonds' issuing price in a 5 Yuan error range
- Generated simulated data for 2000+ allotment subjects by Python for system testing on price, quantity and eligibility
- Transaction Experience
  - Joint bookrunner for Suzhou TZTEK Technology Co., Ltd. on its $180mm IPO
  - Joint bookrunner for Advanced Micro-Fabrication Equipment Inc. on its $220mm IPO

PrinceTechs   **Beijing**
Summer Data Analyst   June 2017 – Aug 2017
- Resolved data anomalies, including out-of-range values, missing values, and data inconsistency issues
- Developed machine learning models, such as random forests, into firm platforms to predict Alipay's customer behaviors
- Used Lasso to select significant features from 19 to 5; eliminating multi-collinearity with 20% accuracy improvement

China Business Network   **Shanghai**
Financial Manager Assistant   May 2016 – Jul 2016
- Updated customized market information, such as opening price of select stocks, markets in Python
- Evaluated returns on ETF market through monitoring 20+ money market ETFs' trends in 2 months
- Coordinated with finance industry leaders and professors for real estate workshops to potential professional customers

Projects

Option Pricing with Monte Carlo Simulation (Java)
- Designed a generic Java option pricing framework for European and Asian options and used antithetic path method to speed up
- Implemented Middleware client-server structure to do multi-threading process and saved more than 40% running time
- Applied GPU programming to enhance whole framework and improved 200% efficiency with same accuracy

IR Curve Building (Python)
- Bootstrapped IR curve by using tension spline technique and applied iteration technique to reduce error
- Used Least-Square-Monte-Carlo to calculate American option price and found optimal execution boundary

VaR Models' Comparison (Excel)
- Applied Brownian Bridge, regression-based EM, and bootstrapping methods to fill missing data based on missing data length
- Estimated VaR results through V/CV, historical simulation, Monte Carlo techniques to assess risks of investment portfolios
- Implemented risk analysis for market portfolios by running stress tests to include possible loss under extreme conditions

SKILLS AND INTERESTS

Programming Languages: Python, Java, R, STATA, Fortran, Tableau
Other Software: Bloomberg, Excel VBA, Microsoft Office (Advance in Excel), Adobe Photoshop, Final Cut Pro, Logic Pro
Languages: Fluent in Mandarin, English, and Japanese (JLPT: N1)
Certificate: Passed SOA P Exam
Interests: Dance, Piano, and Violin