

JINGSHENG (DAVID) HUANG

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EDUCATION

NEW YORK UNIVERSITY

New York, NY

The Courant Institute of Mathematical Sciences

MS in Mathematics in Finance (expected – Dec. 2020)

- **Coursework:** Black-Scholes model, greeks, trinomial tree pricing, VaR, portfolio optimization, Brownian motion, martingales, Monte-Carlo simulation

UNIVERSITY OF MASSACHUSETTS AMHERST

Amherst, MA

B.S in Mathematics, Statistics & Actuarial Science track (Sept. 2015 – May 2019)

- **Coursework:** Black-Scholes formula, implied volatility, hypothesis testing, model/variable selection, Markov Chains, principal component analysis
- **Honors:** Dean's List (4 years), Outstanding Academic Achievement in Actuarial Science (2019)

EXPERIENCE

CHINA SECURITIES

Beijing, China

Quantitative Analyst Intern (June 2020 – Aug. 2020)

- Researched factor exposures based on Barra factor model; implemented 60+ level 3 factors using Python; analyzed single factor performance by 10 statistical criteria
- Cleaned and standardized factors using size-neutral method and achieved a lower correlation to size exposure; evaluated correlation matrix of factors' returns for further selection
- Orthogonalized and composed factors; automated factor selection based on 15+ research reports; stored significant factors in Linux server

GUOTAI JUNAN SECURITIES

Shanghai, China

OTC Derivatives Analyst Intern (May 2018 – Aug. 2018)

- Used Python to extract daily market data including bid, ask prices, and volatility; reduced initial operations from 30 minutes to 5 minutes
- Applied Black-Scholes Model to construct and modify OTC derivatives database and compute implied volatilities of 40+ European options daily
- Analyzed prices of OTC derivatives of barrier options using Monte Carlo simulation; optimized prices against different market indexes

PROJECTS

NEW YORK UNIVERSITY

New York, NY

Market Impact Model

- Cleaned and standardized 3 months' NYSE high-frequency quotes; implemented 4 covariance matrix cleaning schemes and evaluated performance according to 3 market predictors
- Modeled market impact using Amlgreen's view on 1,000+ US stocks; constructed portfolio optimization combined with T-cost; achieved a lower volatility in portfolio return

UNIVERSITY OF MASSACHUSETTS AMHERST

Amherst, MA

Markov Chains & Applications in Pricing Stock (Python)

- Used Python to coordinate and merge 2-year Apple stock prices; constructed transition matrix with regard to daily returns and volatilities
- Implemented kernel density estimation on stock prices returns; conducted cross-validation for choosing the optimal bandwidth; simulated price paths in terms of Monte Carlo

Chicago Insurance Redlining (Multiple Linear Regression)

- Conducted exploratory data analysis on dependent variables (including income; fire and theft rate) for 500+ data points; coordinated and transformed variables for model selection
- Implemented stepwise model selection and compared results with automatic model selection; interpreted significance and presented executive report to faculty

COMPUTER SKILLS/OTHER

Programming Languages: Python, R, Java

Other Software: Microsoft Office (Excel VBA), MATLAB

Languages: Mandarin (native), English (fluent)

Certificate: Exam P, Exam FM