SHAN GUAN

(201) 204-2517 // shan.guan@nyu.edu // linkedin.com/in/shanguan01

EDUCATION

Expected 12/26 **NEW YORK UNIVERSITY** New York, NY
The Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance

- ***Coursework:*** computing in finance (Python), stochastic processes, machine learning, derivatives pricing, portfolio optimization, risk management

09/20 - 06/24 **CENTRAL UNIVERSITY OF FINANCE AND ECONOMICS** Beijing, China
B.S. in Mathematics and Applied Mathematics

- ***Coursework:*** stochastic processes, data mining (Python), ODE, PDE, time series analysis, financial mathematics, microeconomics, macroeconomics, econometrics, C++
- ***Honors/Awards:*** Academic Excellence Scholarship for 2 years (top 5% GPA), Comprehensive Development Scholarship

EXPERIENCE

FOUNDER SECURITIES Beijing, China
08/24 - 11/24 **Financial Engineering Research Group (Sell-side)**
Quantitative Research Intern (Python)

- Developed and backtested single-factor quantitative strategies for stock and fund selection using Python; built portfolios based on market cap, industry classification, and rebalancing frequencies
- Simulated CSI A500 Index's pre-launch performance (2017-2024) based on its compilation methodology, comparing its risk-return profile with that of CSI 300 Index
- Summarized macro market updates for client distribution; drafted review of public offering funds to create weekly newsletter posts

07/23 - 10/23 **Asset Management Division (Buy-side)**
Quantitative Research Intern (Python)

- Researched and implemented equity factors in institutional-survey and earnings-surprise domains, building end-to-end Python pipelines from raw data ingestion to factor computation
- Constructed backtesting framework to evaluate factor efficacy, achieving 31.17% annualized excess return with 16.47% max drawdown in multi-factor portfolios
- Enhanced prediction accuracy by implementing XGBoost for factor weighting

PROJECTS

CENTRAL UNIVERSITY OF FINANCE AND ECONOMICS Beijing, China
09/23 - 01/24 **Quantitative Analysis of Hit TV Series Determinants: LDA & Ordinal Regression (Python, R)**

- Built Python web scraper to collect and preprocess more than 4,000 reviews (ratings plus text) from a leading Chinese media platform
- Developed LDA model (coherence more than 0.5) identifying 4 key themes, with ordinal regression (R) quantifying theme-rating relationships (p less than 0.01)

03/23 - 04/23 **Empirical Analysis of Markowitz Portfolio Theory (Python)**

- Designed and backtested Markowitz mean-variance portfolios on CSI 300 stocks with rolling 30-day estimates and year-long daily rebalancing; evaluated performance using Sharpe ratios
- Compared results against equal-weighted and minimum-variance portfolios, and extended framework to incorporate risk-free assets and investor risk aversion

05/22 - 06/22 **Estimation of Return and Risk of Snowball Option (MATLAB)**

- Constructed Monte Carlo simulation model in MATLAB for Snowball product analysis, generating 100,000 paths of reference index under Geometric Brownian Motion assumptions
- Conducted comprehensive risk-return analysis, including probabilistic payoff distributions and downside risk exposure metrics

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python, R, MATLAB, SQL, C++, EViews
Languages: English (fluent), Mandarin (native)