RUNCHEN CHAI

(332) 733-4685 // runchenchai@nyu.edu // linkedin.com/in/runchenchai

EDUCATION

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

- ***Expected Coursework:*** decision trees, linear regression, Fama-French, Black-Scholes, stochastic processes, risk and portfolio management, machine learning, dynamic asset pricing, financial securities and markets, computational statistics

09/21 - 06/25 **WUHAN UNIVERSITY** **Wuhan, China**
B.E. in Finance, B.S. in Mathematics and Applied Mathematics

- ***Coursework:*** corporate finance, econometrics, investment, linear algebra, ordinary differential equations, numeric analysis, Bayesian statistics, law of large numbers, calculus
- ***Honors:*** 2021 and 2022 Outstanding Student (top 5%), Honorary Graduate of Hongyi Institute, Second Prize in National Mathematics Competition for College Students of China

EXPERIENCE

07/24 - 10/24 **CHINA MERCHANTS SECURITIES** **Shanghai, China**
Quantitative Research Intern (Python, R)

- Conducted independent research analyzing correlations among index constituents and alpha generation in enhanced funds, identified theoretical-consistent patterns, and reported deviations
- Performed comprehensive bond data quality analysis across more than 200 fixed-income securities, evaluating anomalies in ChinaBond valuations and proposing improvement plans
- Collaborated on CAMPISI attribution analysis for simulated portfolios of embedded option bonds, contributing to performance impact assessment
- Analyzed relationship between active equity fund size/shares and A-share market indices across 5 years; independently identified weak negative correlation (t-stat=1.5)

06/23 - 08/23 **TREND CONSULTING**
(A leading Chinese management consulting firm focusing on healthcare) **Shanghai, China**
Intern in Research/Investment/Data Analysis (Python)

- Processed 5 years of Guangdong Health Yearbook data, extracting records with image-to-Excel conversion and 2D transformation, outputting customized tables
- Developed Python heatmap visualizations for provincial health metrics
- Researched medical payment reforms (DRG/DIP) and synthesized academician profiles

PROJECTS

01/23 - 03/23 **LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE** **London, UK (Remote)**
Research on Option Pricing and Quantitative Change Based on Monte Carlo (Python)

- Led 3-member team to master advanced variation-reduction methods, and proposed Taylor expansion approximation method to indefinite integral
- Conducted independent research on lookback option pricing, covering theoretical derivations, PDE-based methods, and Monte Carlo simulations to analyze and compare pricing approaches

11/22 - 12/22 **WUHAN UNIVERSITY** **Wuhan, China**
Cryptocurrency Momentum Strategy Project (Python)

- Developed rank momentum factor strategy for 4 types of cryptocurrency, backtesting 2021 market data via vectorized NumPy operations
- Validated strategy feasibility through multi-dimensional performance diagnostics

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python, MATLAB, SQL, Stata, R
Languages: English (fluent); Mandarin (native)
Affiliation/Certification: Financial Risk Manager (FRM) Part I Passed