

## YUKE ZHAO

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### EDUCATION

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- NEW YORK UNIVERSITY** New York, NY  
**The Courant Institute of Mathematical Sciences**  
**M.S. in Mathematics in Finance** Sept 2018 - Dec 2019
- **Coursework:** pricing theory, portfolio and risk management, market microstructure, interest rate and FX models, stochastic calculus, numerical methods, data structures, OOP in Java, machine learning
- RENMIN UNIVERSITY OF CHINA** Beijing, China  
**BS in Economics, BS in Mathematics** Sept 2014 – June 2018
- **Coursework:** probability, statistics, macroeconomics, financial economics, econometrics, optimization

### EXPERIENCE

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- HIFI** New York, NY  
**Financial Engineering Intern** June 2019 – Aug 2019
- Applied feature engineering, statistical methods (regression models, Markov models), and machine learning techniques (gradient boosting, SVM) for time-series predictions on artists' revenue
  - Used particle swarm optimization and genetic algorithm to calibrate parameters in some models
  - Experimented with pattern matching and clustering algorithms in time series to improve predictions
  - Implemented Monte Carlo simulation to calculate VaR of the underwriting model
- DONGXING SECURITIES** Beijing, China  
**Quantitative Analyst** Feb 2018 – Aug 2018
- Conducted quantitative research on equity alpha and trading strategies
  - Implemented pricing methods (binary tree, least square monte carlo) to build multi-factor model for convertible bonds; developed market-timing strategies based on the factor model
  - Quantified net capital inflow and market sentiment in A-share market and published weekly reports
  - Built automatically updated stock databases for A-share and H-share markets
- ALL-WEATHER QUANTITATIVE TECHNOLOGY** Beijing, China  
**Quantitative Research Assistant** July 2017 – Oct 2017
- Researched fundamentals alpha under Fama-Macbeth framework
  - Backtested factors and analyzed their Sharpe ratios, maximum drawdowns, and turnover ratios
  - Collaborated to develop a futures pairs trading strategy based on stochastic oscillator

### PROJECTS

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- NEW YORK UNIVERSITY** New York, NY  
**Implied Volatility Curve Modelling (Python)** May 2019
- Calibrated SABR model for FX options with ATM, 25d RR, 25d BF quotes under market convention
  - Constructed the implied volatility curve for a given range of deltas
- Market Impact and Portfolio Optimization (Python)** April 2019
- Used nonlinear least square regression to estimate the temporary market impact model described in Almgren et al. (2005) and conducted residual analysis with NYSE TAQ Data (6 GB)
  - Estimated the exponential decay and power-law decay kernels of temporary market impact
  - Incorporated transaction costs into mean-variance model with convex optimization libraries
- Factor Model and Black-Litterman (Python)** Mar 2019
- Replicated Fama-French Five-Factor model and constructed maximum Sharpe ratio portfolio
  - Built Black-Litterman portfolio with views calibrated from the factor model

### COMPUTER SKILLS / OTHER

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**Programming Languages:** Python, Matlab, R, Java, C++  
**Languages:** Mandarin (native), English (fluent)  
**Other Software:** STATA, Wind, Microsoft Office