# Minzi Mao

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## EDUCATION

**Columbia University**, Graduate School of Arts and Sciences — New York, NY

*Master of Arts in Mathematics of Finance* — Expected Dec. 2017

Coursework**:** Stochastic Calculus, Numerical Methods, Time Series, Hedge Fund Strategies, C++ Programming for Quants

**Hunan University**, College of Finance and Statistics — Changsha, China

*Bachelor of Science in Economics, Financial Engineering (GPA: 4.11/4.5, Rank: 2/36)* — Jun. 2016

**Honors:** National Scholarship (2013, 2015; Top 1), First Class Scholarship (2014; Top 3%), Merit Student (2013, 2014, 2015)

Coursework**:** Probability & Statistics, Stochastic Process, Numerical Analysis, Econometrics, Time Series, Investment, Derivative, Programming (C/C++, MATLAB)

**Columbia University**, Columbia College — New York, NY

*Visiting Student* — Aug. 2015 – Dec. 2015

Coursework**:** ODEs, Stochastic Methods in Finance, Advanced Econometrics, Theory of Interest

## EXPERIENCE

**Gelin Dahua Futures Co., Ltd** — Beijing, China

*Option Products Intern, Derivatives Department* — Feb. 2016 – Apr. 2016, Jul. 2016– Aug. 2016

- Articulated the design of a hedging strategy with a local volatility model in R.
- Collaborated with a team on the development of a new internal trading system using Python; entrusted to design its database using PostgreSQL.
- Improved the back-testing tool developed in R by assessing the causal effects of margin rates.
- Performed regression analysis in R to measure relationship between coke prices and coal prices; helped meet client expectations through the design of an exotic option in coal and coke markets.

**Industrial and Commercial Bank of China** — Changsha, China

*Summer Intern, Business Department* — Jul. 2015 – Aug. 2015

- Conducted financial analysis of each client by calculating key financial ratios to assess its solvency and liquidity.
- Effectively communicated with clients orally or in writing to understand and meet all business needs.

**China Merchants Bank** — Changsha, China

*Summer Intern, Department of Investment Banking and Trading Business* — Aug. 2014 – Sep. 2014

- Worked closely with front desk of business managers to determine key changes of commissions fees by monitoring market environment and ensure timely implementation of such changes
- Participated in daily operations of M&A and investment banking business

## PROJECTS

**The Markov Chain Monte Carlo Method for GARCH Model (MATLAB & R)** — Mar. 2016 – May 2016

- Meticulously implemented MCMC scheme for GARCH (1,1) model; performed empirical based research on SSE Composite Index to measure volatility; compared the prediction performance of MCMC based estimation with ML based estimation.

**Time Series Analysis and Modeling for Real Estate Investment in China (SAS & R)** — Mar. 2015 – Apr. 2015

- Developed an ARIMA model using monthly statistics of China national real estate investments during 2009 to 2014 and evaluated model performance through in-sample analysis and back test; accurately forecasted the national real estate investment activities that occurred in 2015 with precision.

**National College Students Innovative Training Project** — Jul. 2012 – Nov. 2013, Apr. 2014 – Nov. 2015

- Led research teams to complete two SIT projects (topics in hypothecation and usufructuary mortgage) and conduct field research in China; Won the research fund of 40, 000 RMB in total.

## SKILLS

C/C++, Python, R, MATLAB, SQL, SAS, VBA, Microsoft Office, LaTeX, Bloomberg