

# Hongbing Li

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## Education

**University of California, Santa Cruz** 09/2018 - Current  
Master of Economics in Econometrics, GPA: 3.94/4.00

**Jinan University, China** 09/2014 - 07/2018  
Bachelor of Science in Computer Science;  
Bachelor of Economics in Financial Engineering (Second degree);

### Relevant Courses

Data Mining, Data Structures and Algorithms, Machine learning, Econometrics

## Projects

**Kaggle Santander Transaction Prediction** (Python, Top 20% in this competition) 03/2019 – 04/2019

- Predicted which customers will make a specific transaction in the future.
- Noticed that some data in test dataset are synthetic. Split test dataset into two groups (fake and real) and regenerate two different sets, and utilized feature augment to solve the class imbalance problem.
- Built LightGBM model and adjusted parameters to make predictions, and got 0.901 score in this competition.
- After the competition, I improved my LGBM model by creating 200 new categorical features and building features around uniqueness, which bring my score to 0.920.
- Built NN model to improve my score further. Blended LGBM and NN with weight 2.1:1 and achieved 0.925 score finally.

**Option Pricing Research** (Matlab, Stata) 10/2018 - 12/2018

- Analyzed 50ETF option pricing by B-S model, Monte Carlo method and VG model.
- Verified that “fat tail” phenomenon exists in the logarithmic rate of return of domestic prices on the 50ETF, meaning that normal distribution assumption in typical B-S model cannot be satisfied in the real world.
- Used generalized method of moment in estimating the parameters in the VG model.
- Compared three pricing methods, finding that the VG model performed better than Monte Carlo and B-S model in a Call(At the money) pricing.

**Volatility Spillover And Co-movement Analysis** (R, Matlab) 03/2018 - 06/2018

- Used stock index data and built DCC-MVGARCH model to analyze the volatility spillover and co-movement between Shanghai composite index and other 19 stock index of the G20 regions.
- Divided economic progress into two periods by the international financial crisis to build the model representatively, which could reveal more specific changes of economic relations among G20 countries before and after a huge crisis.
- Quantified bilateral trade intensity, business cycle synchronization and industrial similarity, which are important explanatory variables but hard to measure.

## Experience

**Summer Intern @ Shanghai Pudong Development Bank, China** 07/2017 - 08/2017

- Assisted manager with banking business such as deposit, exchange, credit card, and so on.
- Participated in assets management of clients and learned related knowledge with the manager.
- Instructed clients in filling various business forms they wanted to handle in order to guarantee the business transaction efficiency.

## Skills

**Programming Language:** Python, R, Matlab, MySQL

**Statistical Software:** Stata, Excel, Eviews

**Technical Skills:** Data Mining and Processing, Data Analytics, Statistical Modeling, Algorithms