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Hui Cai

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EDUCATION

University of Michigan, Ann Arbor, MI Sept. 2017-Apr. 2019

- Master of Science in Quantitative Finance and Risk Management
- GPA: 4.0/4.0 (Top 1)
- Quant Program Merit Scholarship
- Course Highlights: Stochastic Analysis, Financial Mathematics, Machine Learning, Numerical Analysis

Shanghai Jiao Tong University (SJTU), Shanghai Sept. 2013-Jun. 2017

- Bachelor of Science in Mathematics & Applied Mathematics (Mathematics-Finance Experimental Class)
- GPA: 3.7/4.0
- Academic Excellence Scholarship, 2013-2014, 2014-2015; Outstanding Graduate Award, 2017
- Course Highlights: Algebra, Calculus, Stochastic Process, Statistics, Finance, Econometrics

INTERNSHIP EXPERIENCES

Galaxy Futures, *Option Trading Intern* May 2018-Jul. 2018

- Researched low risk arbitrage trading strategies on commodity and equity options; developed option backtesting framework in Python like calculating Greeks, IV, automatically extracting option data from database, etc.

Shanghai Zenithmacer Asset Management Co. Ltd., *Quantitative Research Intern* Jan. 2017-Jul. 2017

- Developed quantitative trading strategy on equities (focused on technical analysis); did backtesting on them via Python
- Built a risk management model based on five factors such as interest rate (Shibor) and the average close price of the stock market

China Hedge Fund Research Center, *Research Assistant* Sept. 2016-Dec. 2016

- Built Python web crawler to capture 10G text data from Wechat media platform of brokers and researched the abnormal return of recommended stocks using event study methodology
- Realized ARMA-GARCH models in R to study arbitrage opportunities between *CSI 300 Index* Futures and *Singapore A50 Index* Futures

Singapore Goldpebble Research Pte. Ltd., *Data Analyst Intern* May 2016-Aug. 2016

- Conducted industry research on leading P2P live-streaming companies such as Momo and YY and built regression model to estimate the revenue of Momo with the error less than 5%
- Implemented Kalman filter, X-12-ARIMA seasonal adjustment, and other methods of time series analysis to accomplish data analysis on economic data with the help of Python

ACADEMIC EXPERIENCES

Financial Engineering Research Assistant (Credit Default Probability Prediction) May 2018-Jul. 2018

- Realized a multi-period corporate default prediction model based on forward intensity approach including doing parameter estimation of likelihood function in Python and assessing the model based on ROC curve (with AUC of 0.8 and KS of 0.4 for one month prediction)
- Researched on KMV model and Altman's z-score model, and realized them in Python

Systemic Risk Quantification Mar. 2017-May 2017

- Utilized VARMA-MGARCH models to forecast the variance-covariance matrices of HS300 industry indices, and founded risk index through VaR based on the matrices
- Researched a variety of optimization methods and built infrastructure in Python to perform parameter estimation which sped up the prior algorithm by 10x

EXTRACURRICULAR ACTIVITIES

Ubiquant Quant Trading Competition (Silver Medal Winner) Jun. 2018-Jul. 2018

- Led a team of three to attend Ubiquant Quant Trading Competition and won the silver medal (with a return of 14% and max drawdown of 2.17% in three-hour mock trading)

QUALIFICATIONS& SKILLS

Qualifications: CFA Level III Candidate

Programming Skills: Proficient with Python, R, Matlab, C++, Stata; Basic knowledge of SQL