

Mengyao Huang

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EDUCATION

University of Michigan (UM)

Ann Arbor, MI

M.S. in Quantitative Finance and Risk Management & Data Science Certificate Program GPA:3.6/4.0 Sept.2017-April.2019

- Courses: Numeric Methods in Finance, Financial Maths, Computational Finance, Financial Trading, Statistical Learning in Finance, Data Mining, AI Foundations, Machine Learning, Data Manipulation & Analysis, Marketing Science PhD Seminar

Dalian University of Technology (DUT)

Dalian, China

B.S. in Mathematics and Applied Mathematics & B.S. in Finance GPA:3.6/4.0

Sept.2013-Jun.2017

Mathematical Modeling Training Certificate Program

- Courses: Stochastic Process, Optimization Method, Financial Mathematics, Time Series, Microeconomics, Financial Risk Management, Mathematical Modeling in Complex system Evolution & Game Theory
- Awards: First Prize in Mathematical Modeling Contest; Technological Innovation Scholarship
- Thesis: Prey-predator models affected by water resource (Submitted and Revised by Physical Review A)

PROFESSIONAL EXPERIENCE

BOHAI Securities Co., Ltd

Tianjin, China

Researcher, Quantitative Trading Division

Jul.2016-Aug.2016

- Contributed to prices' trend period estimation by introducing weighted Fourier Transform Algorithm
- Improved trading strategies and profitability of quantitative timing model algorithm by adopting year-on-year series, choosing optimal parameters like length of sub-sequences and judging the trend cycle of financial market

AXA Group, Hong Kong Branch

Hong Kong, China

Assistant Analyst, Market Research Department

Jan.2016-Feb.2016

- Contributed to stock-trading strategies based on MACD, KDJ, SAR, price-volume relationship and other indicators
- Used EVIEWS to analyze stability of time series, implemented both multivariate linear regression model and GARCH & ARCH model to predict Hang Seng Index

RESEARCH EXPERIENCE

Research Assistant, UM

May.2018-present

Ross Business School, Advisor: Fred M.Feinberg

- Operated Data Visualization for CRM database with ggplot
- Carried data fusion project (cleaning/K-1 conversion/clustering/dimension reduction) with Python Pandas
- Implemented K-means/K-modes algorithm and Multinomial Logit model (sklearn and mnlogit) in Python
- Learned EM/Random Forest/Causal Forest/Matching/Bayesian Mixture algorithm
- Used RSTAN to implement Gaussian Mixture, Multinomial Logit and Nested Logit model and cross validation test

Polynomial Optimization Approach Exploration in Principal-Agent Problem, UM

Nov.2017-present

Researcher, Department of Mathematics, Advisor: Nicolas Hernandez

- Realized Optimization Algorithm to solve PA problem with MATLAB and made some basic improvement

Optimal Model of Asset Liability Management based on Risk Control of Stock and Increment, DUT

Researcher, Department of Management and Economics

Nov.2015-Jun.2017

- Combined kernel estimation, credit rating transition matrix, robust optimization concerning uncertainty of return's distribution (mixture and elliptical) & Worst CVAR to set up optimal models and Realized Monte Carlo simulation

Quantitative Trading Research Laboratory, DUT

Researcher, Department of Mathematics & Department of Innovation and Entrepreneurship

Sept.2016-Jun.2017

- Combined Macro factors like PMI index and Monetary factors to determine normal intervals of Futures' prices
- Considered mean reversion properties of stationary series and spread, chose optimal parameters, realized statistical arbitrage trading strategy and implemented simulation for risk analysis

Complex Ecosystem Evolution Model Construction, DUT

Researcher, Department of Innovation and Entrepreneurship

Mar.2015-May.2016

- Considered influence of external factors on stability of ecosystem, adopted Partial Differential Equations, introduced Energy Distribution to measure the complexity and realized Monte Carlo computational simulation

SKILLS

Programming and data processing tools: Fluent in C++, Python, MATLAB and R; Familiar with SQL, STAN, Lingo and EVIEWS