Qingyu Zhu

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EDUCATION	**The University of Hong Kong (HKU)**	Hong Kong, China
	M.S. in Computer Science, GPA: 3.5/4.0	Sep. 2017 - May. 2019 (Expected)
	Nankai University (NKU)	Tianjin, China
	B.E. in Software Engineering, GPA: 3.3/4.0	Sep. 2012 - Jun. 2016

RESEARCH EXPERIENCE

Data Mining and Visualization Projects
Department of Computer Science, HKU   Sep. 2017 - Present

- Developed an investment recommendation system. The new model forecasts the trend of futures market based on high-frequency financial data and the information extracted from the financial news with NLP methods.

- Built a classifier model that predicts the best mode of solar panel operation based on the weather data of Hong Kong with Weka(supervised learning). Constructed the data with the sliding window method. Improved prediction accuracy by 50%.

- Developed a data visualization website that supports exploring American food culture based on Yelp and government data with Tableau, D3.js and XDAT.

- Visualized the global flight itinerary map based on the dataset that contains 10k+ flight routes between 3k+ airports around the world.

Evaluation and Improvement on the Capital Asset Pricing Model
Quantitative Economics Institute, NKU   Feb. 2015 - Jun. 2017

- Extended the capital price prediction model with a new momentum feature. Used the new model to analyze international software & computer services sectors and discovered the slowing down of this industry's growth.

- Introduced new factors to the price prediction model to describe the variance of error of time series data. The new features helped to capture the volatility of the stock market and reduce the model's information loss by 10%.

Business Intelligence System
College of Software, NKU   Dec. 2015 - May. 2016

- Designed and developed a multidimensional data visualization system based on USA supermarket data. The intelligence system provides analysis services through heatmap, interactive histogram and geographic map developed by D3.js.

- In charge of designing and implementing the front-end with HTML5 and JSP. Participated in developing the back-end structure which includes the MySQL database and server based on Spring MVC framework.

Mathematical Contest in Modeling (MCM), USA
Team Leader   Feb. 2015

- Managed a three-member team to build a three-stage model for finding a crashed plane in open water and completed a solution paper: *Where is the Lost Plane.*

- Used a differential equation to analyze the falling process of the plane. Applied Monte Carlo technique to simulate the behavior of floating wreckage. Adopted gradient distribution to determine the optimal search path.

WORKING EXPERIENCE	**Data Analyst (Full-time Employee)**
	Risk Management Dept, Home Credit Consumer Finance Nov. 2016 - Jun. 2017

- Contributed to developing quick-response evaluation modules for the online loan applying system, which can filter out unqualified applications in the front-end.
- Analyzed the quality of loans based on the personal data and credit record; Improved the risk prediction model by validating and modifying its features.

Data Analyst (Intern)
Business Department, Faw Auto Finance   Oct. 2016 - Nov. 2016

- Maintained the core databases and the loan system.
- Analyzed sales data and organized customer information.

Java Developer (Intern)
Java Development Internship, ChinaSoft International   Jun. 2014 - Aug. 2014

- Led a four-member team to develop a social networking site and its Android app that support finding training partners and making exercise plans.
- In charge of front-end (Web and Android app) design and implementation; Contributed to database design and Spring MVC architecture coding.

TEACHING EXPERIENCE

Teaching Assistant
Quantitative Economics Institute, NKU   Jun. 2015 - Aug. 2016

- Guided students through MatLab, Excel and SPSS projects.
- Provided suggestions for the mathematical contest in modeling.

Volunteer Teaching Assistant
The Green Lion, Guilin, China   Jul. 2013 - Sep. 2013

- Translated for foreign teachers and collected students' English course feedback to foreign teachers. Introduced local culture to volunteers from Britain and Holland.

PUBLICATION

Analysis of the Software and Computer Services Sectors with a New Carhart 4-Factor Model.

- Presented at the 23rd Annual Conference of the Multinational Finance Society, June 26-29, 2016, Stockholm, Sweden
- Published in Journal of Mathematical Finance, 2017, 7. Corresponding Author.

A New Fama-French 5-Factor Model with SSAEPD Errors and EGARCH-type Volatilities.

- Published in Asian Academic Research Journal of Multidisciplinary, 2017, 4(4): 184-203. Corresponding Author.

Value-at-Risk for US Bank Portfolio Based on a New Fama-French 5-Factor Model.

- Under review. Corresponding Author.

HONORS & AWARDS

Meritorious Winner, US Mathematical Contest in Modeling (9%)	2015
Gongneng Scholarship, Nankai University (15%)	2015
Merit Student, Nankai University (15%)	2016

Frameworks & Tools

Data Visualization(Tableau, D3.js, Gephi, XDAT); Data Mining(Weka, scikit-learn); Web Development(Spring MVC, MySQL); Android Development(Android Studio).