

# 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 - May. 2016

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

- Developed an investment recommendation system. The model forecasts futures market movement direction based on high-frequency financial data and the information extracted from the financial news with SVM and 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 with lat and lng parameters.

**Evaluation and Improvement on the Capital Asset Pricing Model**  
Quantitative Economics Institute, NKU     Feb. 2015 - June. 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 team of 3 to build a three-stage model that search a downed plane in the open water and completed an article in English: *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.

<b>WORKING EXPERIENCE</b>	<b>Data Analyst (Full-time Employee)</b>	
	Risk Management Dept, Home Credit Consumer Finance	Nov. 2016 - Jun. 2017
	<ul style="list-style-type: none"> <li>Contributed to developing quick-response evaluation modules for the online loan applying system, which can filter out unqualified applications in the front-end.</li> <li>Analyzed the quality of loans based on the personal data and credit record; Improved the risk prediction model by validating and modifying its features.</li> </ul>	
	<b>Java Developer (Intern)</b>	
	Java Development Internship, ChinaSoft International	Nov. 2014 - Jun. 2014
	<ul style="list-style-type: none"> <li>Led a four-member team to develop a social networking site and its Android app that support finding training partners and making exercise plans.</li> <li>In charge of front-end (Web and Android app) design and implementation; Contributed to database design and Spring MVC architecture coding.</li> </ul>	
	<b>Data Analyst (Intern)</b>	
	Business Department, Faw Auto Finance	Oct. 2016 - Nov. 2016
	<ul style="list-style-type: none"> <li>Maintained the core databases and the loan system.</li> <li>Analyzed sales data and organized customer information.</li> </ul>	
<b>TEACHING EXPERIENCE</b>	<b>Teaching Assistant</b>	
	Institute of Statistics and Econometrics, Nankai University	Feb. 2015 - Jun. 2016
	<ul style="list-style-type: none"> <li>Guided students through MatLab, Excel and SPSS projects.</li> <li>Provided suggestions for the mathematical contest in modeling.</li> </ul>	
<b>PUBLICATION</b>	<i>Analysis of the Software and Computer Services Sectors with a New Carhart 4-Factor Model.</i>	
	<ul style="list-style-type: none"> <li>Presented at the 23rd Annual Conference of the Multinational Finance Society, June 26-29, 2016, Stockholm, Sweden</li> <li>Published in Journal of Mathematical Finance, 2017, 7. Corresponding Author.</li> </ul>	
	<i>A New Fama-French 5-Factor Model with SSAEPD Errors and EGARCH-type Volatilities.</i>	
	<ul style="list-style-type: none"> <li>Published in Asian Academic Research Journal of Multidisciplinary, 2017, 4(4): 184-203. Corresponding Author.</li> </ul>	
	<i>Analysis of US Sector of Services with a New Fama-French 5-Factor Model.</i>	
	<ul style="list-style-type: none"> <li>Published in Applied Mathematics, 2017, 8(9): 1307-1319</li> </ul>	
	<i>Value-at-Risk for US Bank Portfolio Based on a New Fama-French 5-Factor Model.</i>	
	<ul style="list-style-type: none"> <li>Under review. Corresponding Author.</li> </ul>	
<b>HONORS &amp; AWARDS</b>	Meritorious Winner, US Mathematical Contest in Modeling (9%)	2015
	Gongneng Scholarship, Nankai University (15%)	2015
	Merit Student, Nankai University (15%)	2016
<b>Frameworks &amp; Tools</b>	Data Visualization(Tableau, D3.js, Gephi, XDAT); Data Mining( Weka, scikit-learn); Web Development(Spring MVC, MySQL); Android Development( Android Studio).	