

SHANSHAN LI

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QUALIFICATION

- Over 5 years of research and programming experience in statistical modeling and data mining
- Hands-on experience of large data sets analysis and deep understanding of algorithm
- Excellent in communication; goal and detail oriented and adaptive to team working environment

RELATED SKILLS

- Python, R, SAS, Unix/Linux, SQL, Shell Script

EDUCATION

STONYBROOK UNIVERSITY	New York, US
• PHD in Applied Mathematics and Statistics	2012--2017
NANKAI UNIVERSITY	Tianjin, China
• Dual Degree of B.S. in Economics and B.S. in Applied Mathematics	2008—2012

ACADEMIC PROJECT

STONYBROOK UNIVERSITY	
<i>Research Assistant, Department of Applied Math and Statistics</i>	September 2012-- December 2016
<ul style="list-style-type: none">• Designed and implemented Python code of a novel algorithm named Multi-Active-Shooting , in which used penalized kernel smoother, for solving high-dimension-low-sample-size problem. Processed with 1-minute data of 233 stocks included in S&P 500 from year 2002 to 2013. Constructed time-varying network structures by presenting both symmetric and asymmetric approaches: Partial Correlation network and VAR adjacency network• Carried out both theoretical and empirical studies of four different change-point detection rules. Detected the stochastic structural breaks in high dimensional time series for financial surveillance• Won the first prize of HorseRace Portfolio Competition held by McKinley Capital Management LLC with 2 teammates. Possessed the massive historic data with Seawolf Cluster, constructed a better fitted math model (MNTS-ARMA-GARCH), and obtained a well-performing large-scale portfolio	

COLD SPRING HARBOR LABORATORY

<i>Research Assistant, MACHAEL WIGLER LAB</i>	April 2014--December 2016
<ul style="list-style-type: none">• Wrote Python code to partition, alignment, sort, mark duplicate and realign to the raw FASTQ data from single cell. Used Bayesian Method to call the somatic variants of plasma pairs. Used SQL to build the data frame of the VCF files to make it more flexible and faster to explore the variants of the samples.	

INSTITUTE OF ROBOTICS AND AUTOMATIC INFORMATION SYSTEM	Nankai University
<i>Research assistant</i>	March 2010--June 2011
<ul style="list-style-type: none">• Helped operated simulation experiments, designed the routing algorithm for the AS-RII Robot, implemented the program in MATLAB and APIs on built-in platform• Established a brand new self-service system "Intelligent Life Insurance" for insurance company with seven team members. The system quantifies the factors that effect the purchasing, and the features could be used in collecting the feedback of all the potential guests through the decision tree computation	

INSTITUTE OF SCIENTIFIC COMPUTING	Nankai University
<i>Research assistant, Bioinformatics Laboratory</i>	June 2011--May 2012
<ul style="list-style-type: none">• Participated Morgan Stanley Modeling Contest for Financial Derivatives with two teammates, used GBM, GARCH, SV models to fit 10 stock's data, created an original method to simulate the max/min prices and closing prices by using Bootstrap, and ranked 11th in 67 groups	

WORK EXPERIENCE

CHINA FUTURES MARGIN MONITORING CENTER	Shanghai, China
<i>Part-time Intern, Research Department and Monitoring Office</i>	May--October 2011
<ul style="list-style-type: none">• Collaborated with the client teams of China Financial Futures Exchange and introduced a new kind of treasury bond futures index, especially worked on analysis of methodology details. Helped analyze the volatile process of futures price and supervised the price trend of metal products, submitted daily market report to CFMMC	