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; Self learner and quick starter

SKILLS

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

EDUCATION

STONYBROOK UNIVERSITY Stony Brook, NY

- PHD in Applied Mathematics and Statistics (CSHL fellowship) 2012--2017

NANKAI UNIVERSITY Tianjin, China

- Double Degree of B.S. in Economics and B.S. in Applied Mathematics 2008--2012

EXPERIENCE

STONYBROOK UNIVERSITY

Research Assistant, Department of Applied Math and Statistics September 2012--June 2017

- Designed a novel algorithm named Multi-Active-Shooting and developed the Python implementation, in which used penalized kernel smoother, for solving high-dimension-low-sample-size problem
- Processed with 1-minute data of 233 stocks 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. Managed and analyzed data > 10 GB
- Carried out both theoretical derivation and empirical simulation of four different change-point detection rules. Detected the stochastic structural breaks in high dimensional time series for financial surveillance
- Improved the weighted k-means clustering in both accuracy and computational efficiency by introducing an iterative algorithm to obtain the optimal weights

COLD SPRING HARBOR LABORATORY

Research Assistant, James Hicks Lab April 2014--December 2016

- Implemented Python modules to process and parse millions of genomic sequences. Constructed relational databases using SQL from un-structured files to make it more flexible and faster to explore the information of the variants. Developed Bayesian Method to identified the genetic mutations from patients.

INSTITUTE OF ROBOTICS AND AUTOMATIC INFORMATION SYSTEM Nankai University

Research assistant March 2010--June 2011

- Built a novel self-service system "Intelligent Life Insurance" for insurance company. The system quantifies the factors that influence purchasing, and the features could be used in collecting the feedback of all the potential guests through the decision tree computation

WORK EXPERIENCE

MCKINLEY CAPITAL MANAGEMENT LLC Stony Brook, NY

Summer Intern June—August 2013

- Won the first prize of HorseRace Portfolio Competition. Possessed the massive historic data of 100 stocks, constructed a better fitted math model (MNTS-ARMA-GARCH), and obtained a well-performing large-scale portfolio

PUBLICATIONS

- S. Zhang, S. Li and W. Zhu, “An iterative algorithm for optimal variable weighting in K-means clustering”, *Communications in Statistics*, (submitted); 2016
- Li, Xing, “Estimation and detection of network variation in intraday stock market”, *Journal of Network Theory in Finance*, (submitted); 2017