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EDUCATION

- **National University of Singapore, Singapore** August 2019 – January 2021
  - M.Sc in Statistics, 4.61/5.00
  - Advanced Topics in Applied Statistics, Statistical Analysis of Networks, Applied Data Mining
- **Nanjing Audit University, China** September 2015 – June 2019
  - B.Sc in Economics with Honors(Finance, CFA direction), 89.72, 3/103
  - Quantitative Methods, Behavioral Finance, Economics and Econometrics, Financial Engineering
- **University of California, Los Angeles, USA** July 2017 – August 2017
  - A(Excellent, Academic Credit Earned)
  - International Business and Leadership Management Program

RESEARCH INTERESTS

- Data Privacy and Fairness, Network Science, Causal Discovery, Machine Learning, Social Data Science

PUBLIC SERVICES

- Reviewer: the Academy of Management, 2022, in areas of Research Methods, COM, Digital Tech and ORG.

PUBLICATIONS

- Song.Y.& Wang.T.(2021). ***Continuous Release of Triangles on Directed Graph Streams under Differential Privacy.***(In preparation, will upload codes and the preprint on GitHub)
- Song.Z., Li.W., Jin.X., Ying.J., Zhang.X., Song.Y., Li.H. & Fan.Q.(2021). ***Genetics, Leadership, and Well-Being: An Investigation with A Large-Scale GWAS.*** (Have submitted to the Proceedings of the National Academy of Sciences of the United States of America(PNAS), under the second review)
- Ng.J., Hubner.S., Teow.J., Song.Y., Wang.Y., Kaur.A., Frese.M., Song.Z., Lee.L. & Moriguchi.T.(2021). ***Development of Cultural Inventory on Asian Countries and Exploratory Approach to Predict Innovation.*** In the Academy of Management Proceedings, 81st Annual Meeting of the Academy of Management(AOM)

RESEARCH EXPERIENCE

- **Collaboration** June 2021 – Current
  With Prof. Tianhao Wang CS Department, University of Virginia
  - Based on edge-based wedge sampling and random paring, proposed an accurate and efficient approximate **global triangle counting algorithm on directed graph streams** in Python, which could support range queries of triangle change and triangle counting queries after batch updates. Performed the fundamental theoretical analysis.
  - Designed a continuous release algorithm of triangle counting queries under **differential privacy**.
  - By now, drafted the related work, preliminaries and algorithm design sections in our prepared preprint.
- **Research Assistant** June 2020 – January 2021
  Supervised by Prof. Zhaoli Song NUS Business School
  - Joined the ***Enhancing Productivity of Innovations across Cultures for Singapore(EPICS)*** project.
  - Pre-processed a survey dataset with 667 variables; designed an automatic system to identify cultural items and innovative product and service items by random forest with 95% AUC; visualized the overall dataset and specified items; assisted in selecting 64 corresponding items to do EFA, CFA, SEM and further post-analysis for understanding cross-cultural differences among 5 Asian countries.
  - Drafted the method and analysis-relevant sections of an **accepted** paper to **AOM**.
- **Research Assistant** June 2020 – January 2021
  Supervised by Prof. Qiao Fan & Prof. Zhaoli Song Duke-NUS Medical School & NUS Business School
  - Joined the ***Genome-wide Association Studies*** project, pre-processed and analyzed data from UK Biobank with over 500,000 participants and 19 million genetic variants.
  - Developed an automatic system to execute GWAS on NSCC's server based on 22 pairs of general chromosomes and 119 behavioral and leadership phenotype variables with the overall, female and male samples, respectively;

drew the 357 Manhattan plots and QQ plots; identified top variants; calculated lambda and genetic correlation and heritability, etc. in Linux Shell and R; automatically output results and reports.

- Applied other advanced GWAS and post-GWAS approaches in state-of-the-art papers to the pre-processed data.

- **University-level Excellent Graduation Thesis** 2019
  Supervised by Prof. Guangying Liu
  - ***Short-text Sentiment Analysis Based on Semantic Segmentation and Word Embedding Models***
  Keywords: Deep Learning, Statistical Learning, TFIDF, Tri-gram, Word2vec, Doc2vec
- **Contest Paper** Meritorious Winner, MCM/ICM, 2018
  - ***Pacing on the Path of Danger - Where is Our Utopia?***
  Keywords: PSR, Lotka-Volterra Model, EGARCH-GPD, Fragility Measure, Environment Risk Regulation
- **Computer Software Copyright**
  - H.Y.Ren, Y.Song, K.Y.Wu, J.X.Li. (2018). **Intelligent Vehicle Lock Control System Based on Face Recognition V1.0**, National Copyright Administration of the P.R.China: 2018SR564936.
- **Strategies for Quantitative Investments**
  - ***Big-cap Graham Strategy*** - the accumulated return between 1/1/2009 and 1/1/2018 was 395.456%.
  - ***Small-cap Stop-loss Strategy*** - the accumulated return between 1/1/2009 and 1/1/2018 was 1176.548%.

WORKING EXPERIENCE

- **Teaching Assistant/Grader** July 2020 – January 2021
  Mathematics, Computational and Statistical Sciences Yale-NUS College
  - Graded programming projects and data science problem sets and answered questions for ***YSC2239- Introduction to Data Science*** instructed by Visiting Prof. Alexandros Beskos from UCL and Alan Turing Institute.
  - Topics covered statistical inference, machine learning, data visualization and big data analytics.
- **Data Scientist Intern** May 2018 – August 2018
  Fin-Tech Research Center, Suning Institute of Finance Suning HQ, China
  - Based on over 30 million customer data, developed a real-time parameter monitoring system to detect and record anomalies and deviations and evaluate the performance of 15 online and offline risk models over 18 months.
  - Wrote a detailed research report about device faker tools and environment faker tools for a prepared network monitoring system of grey and dark industries.
  - Researched the Tech-giants' risk management products and services, wrote 6 reports on Dual Recording System, Face Recognition, Collection Robot, Marketing Risk Management Solutions, etc.
  - Retrieved and processed customer default data using SQL; mined customer deviance behaviors with Cypher on an established risk management knowledge graph, identified over 3000 pieces of records.
- **Investment Research Analyst Intern** October 2017 – January 2018
  Department of Investment Research, Xinhua Fengyu Capital Management CO., LTD China
  - Constructed an analytical framework with an AHP method; built up 3 financial models to assist decision-making for investments. Collected, analyzed, and visualized corresponding industrial data.
  - Wrote 4 internal investment reports on the projects to be invested and provided relevant investment advice.

SELECTED HONORS and AWARDS

- **Outstanding Graduates with Honors**, Nanjing Audit University, 2019
- **National Scholarship**, Ministry of Education of the People's Republic of China, 2018
- **President Scholarship**, Nanjing Audit University, 2018
- First-Class Scholarship, Nanjing Audit University, 2018
- Merit Student, Nanjing Audit University, 2018
- **Meritorious Winner of the Interdisciplinary Contest in Modeling(MCM/ICM)**, COMAP, USA, 2018
- **Second Prize of Eastern Area of China in the First China (Hengqin) International University Quantitative Finance Competition**, Worldwide, 2018
- **Jiangsu Provincial Government Scholarship Program of Overseas Studies**, JESIE, 2017

SKILLS Python, R, SQL, Linux Shell, LaTex

CERTIFICATION

- IBM Data Science Professional Certificate, powered by Coursera, 2019
- FRM(Financial Risk Manager) Exam Part I and Part II(Pass All, Nov.2017)