YIXUAN LIU

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EDUCATION

Southern University of Science and Technology (SUSTech) Shenzhen, China
M.S. in Mathematics, Department of Statistics and Data Science Sept. 2020 – Expected June 2022
GPA: 3.64/4.00 (top **3/15**)
Related courses: Advanced Statistics (A+), Functional Data Analysis (A+), Categorical Data Analysis (A+), Social
Network Analysis (A-), Selected Research Topics in Statistics (A-)

Southern University of Science and Technology (SUSTech) Shenzhen, China
B.S. in Statistics, Department of Statistics and Data Science Sept. 2016 – June 2020
GPA: 3.37/4.00
Graduate-level courses: Bayesian Statistics (93), Computational Statistics (88)

University of Wisconsin-Madison (UW-Madison) Madison, WI, US
*Visiting International Special Students Program **Statistics Cohort*** Sept. – Dec. 2019
GPA: 3.75/4.00,
Graduate-level courses: Statistical Methods I (A), Introduction to Statistical Inference (AB)

Illinois Institute of Technology (IIT) Chicago, IL, US
Summer Research Program (Modern Statistics in the Big Data Paradigm) July – Aug. 2019
GPA: 4.00/4.00

King's College London (KCL) London, UK
Summer Program (Healthcare and Technology) July – Aug. 2018

STANDARDIZED LANGUAGE TEST

TOEFL iBT Test: **27** Reading + **27** Listening + **25** Speaking + **26** Writing, Total **105**
GRE General Test: Verbal **158** + Quantitative **166**, Total **324**

RESEARCH EXPERIENCES

Quantifying Award Network and Career Development in Movie Industry Shenzhen, China
Investigator Mar. 2021 – Present
Supervisor: Prof. Yifang Ma, Department of Statistics and Data Science, SUSTech, China
- Analyzed multilayer networks of awards, award winners, and social ties with network-based statistics
- Quantified early career prize-winning through classification methods including Logit and Complementary Log-log
- Applied causal inference framework to study impact of early-career performance on future productivity and fame

Statistical Learning on Giant Pandas' Ethology Shenzhen, China
Investigator Nov. 2019 – May 2020
Supervisor: Prof. Yifang Ma, Department of Statistics and Data Science, SUSTech, China
- Applied time series analysis through ARIMA, NNAR, boosting methods predicting rest behavior
- Applied unsupervised learning include hierarchical, partitional, spectral clustering, and density-based methods
- Studied the temporal data clustering with various distance measures including DTW, SDB, and GAK

eTailers' Revenue Models and Customer Behavior Analysis Based on Big Data Shenzhen, China
Investigator Dec. 2018 – Sept. 2019
Supervisor: Prof. Jae Kyu Lee, College of Business, **KAIST University**, Korea & **Xi'an Jiaotong University**, China
        And Prof. Jooyoung Park, PHBS Business School, **Peking University**, China
- Processed survey data, implemented linear and nonlinear regression and residual analysis
- Figured out association rules and collaborative filtering behind the products displayed
- Attended 2019 International Conference on Electronic Commerce, Korea as co-author and presenter

Latent Variable Models for Mixed Normal and Binary Outcomes Chicago, IL, US
Group Leader July – Aug. 2019
Supervisor: Prof. Lulu Kang, Department of Applied Mathematics, **Illinois Institute of Technology,** US
- Studied parameter estimation for latent variable models of mixed continuous and ordinal responses
- Implemented the EM algorithm combined with Monte Carlo approach

PUBLICATIONS

- **Yixuan Liu**, Yifang Ma. Quantifying Award Network and Career Development in Movie Industry. (2021). (working paper)
- Jae Kyu Lee, Jooyoung Park, **Yixuan Liu**, Minxuan Luo. (2019). eTailer's Two Dimensional Revenue Model: Lessons from Amazon and Alibaba. Presented at ICEC2019: 21st International Conference on Electronic Commerce. July 3-5, 2019. Busan, South Korea. (conference paper presented)

PROJECTS

Functional Data Analysis of Fruit Fly and Swedish Life Table   Shenzhen, China
Class Instructor: Prof. Jiangqing Shi, Department of Statistics and Data Science, **SUSTech,** China   Mar. – June 2021
- Fit with appropriate basis and dimension reduction with PLS, functional PCA, dynamic fPCA
- Created and compared different scalar-on-function models, functional time series models, etc.

Categorical Data Analysis with Grouped and Ungrouped Data   Shenzhen, China
Class Instructor: Prof. Xiyun Jiao, Department of Statistics and Data Science, **SUSTech**, China   Mar. – June 2021
- Implemented categorical models including Logit, Probit, baseline Logit/Probit, Bayesian models, etc.
- Carried out inferences to address significance with likelihood ratio, Pearson chi-square, and Wald test

Multivariate Analysis on Disease Prevalence and Control   Madison, WI, US
Class Instructor: Prof. Wei-Yin Loh, Department of Statistics, **UW-Madison**, US   Sept. – Dec. 2019
- Explored on geolocation's effect on the clustered result of cities by proximity, with spatial visualization
- Discovered latent relationships between disease prevalence and control approaches by Canonical Analysis

WORKING

Applied Data Science Intern   Shenzhen, China
dunnhumby China Limited   Sept. 2021– Expected Jan. 2022
- Data analysis through PySpark with principal indices in customer knowledge and customer engagement
- Developing recommender system for promotion from item-based to network-based approaches

HONORS

2020   **Outstanding Undergraduate Thesis in the Department of Statistics and Data Science**
2019   Innovative Research Paper Runner-Up (3rd author) in 21st International Conference on Electronic Commerce hosted by International Center for Electronic Commerce
2019   **Grand Prize Award in Preliminary Round of the 2019 "FLTRP ETIC Cup" English Writing Contest**
2019   Best Speaker of Preliminary Round of 22nd "FLTRP ETC Cup" National Debating Competition
2018   **Meritorious Winner in American Mathematical Contest in Modeling (MCM)**
2017   First Prize in 18th Guangdong Physics Experimental Design Competition

TEACHING

2021   Teaching assistant of STA217-Introduction to Data Science @SUSTech
2021   Teaching assistant of MA409-Statistical Data Analysis (SAS) @SUSTech
2020   Student mentor in the Students' Learning Center @SUSTech
2020   Teaching assistant of MA309-Time Series Analysis @SUSTech
2018   Student assistant at CLE (Centre of Language Education) in SUSTech

SOFTWARE SKILLS

Python, R, MATLAB, Latex, Stata