ZHONGYUAN LYU

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EDUCATION

University of Michigan, Ann Arbor September 2017 - Present
M.S. in Applied Statistics, Overall GPA: 3.782/4

Related courses: Probability Theory (phd level)

Fudan University September 2013 - June 2017
B.S. in Statistics, Overall GPA: 3.41/4

University of Warwick September 2015 - December 2015
Undergraduate Overseas Exchange (UIOA-EOS)

RESEARCH EXPERIENCES

Adaptive Latent Class Regression Modeling on Childhood Pneumonia Etiology
May 2018 - Now
Researcher in Department of Biostatistics under Zhenke, Wu *University of Michigan, Ann Arbor*

- Modified the iterative re-weighted least square part of the methodology of Generalized Additive Model Selection using C and R.
- Implemented the Distributed Multinomial Regression using R.
- Extended the method to multinomial logistic case using Poisson approximation.

Applying Latent Class Model to Psychometrics Data
March 2018 - Now
Researcher in Department of Statistics under Gongjun, Xu *University of Michigan, Ann Arbor*

- Implemented the algorithm of estimating Q-matrix in latent class model based the maximum likelihood estimation by EM algorithm using R.
- Improved the speed of the algorithm by rewrote the code in C.
- (To be added since the project is still in progress..)

Exploration in Predicting Outcomes of NBA Games
January 2017 - June 2017
Dissertation of Undergraduate under Juan, Shen *Fudan University*

- Designed and developed a program that using web crawling techniques to get the team-level STATS for each game from NBA official website using Python.
- Applied classic linear regression and logistic regression to the dataset using R.
- Applied Group-Lasso method for both regressions to do the variable selecting for both linear and logistic cases using R.
- Simulated the pattern of NBA playoffs to predict the championship by probability using the regular season STATS using Python.

Simulation Study of Bundesliga Season Outcomes
January 2017 - June 2017
Researcher under Peiwen,Yu *Fudan University*

- Used random simulation and multiple logistic regression to predict teams qualified for the UEFA Champions League based on previous Bundesliga teams data.

INTERNSHIP EXPERIENCES

Game Operation
July 2016 - August 2016
Tencent *Shanghai*

- Followed up analysis on competitive products.
- Independently designed and wrote user questionnaires
- Collected and cleaned research data, analyzed and wrote data reports.

Audit Department
July 2015 - September 2015
Ernst & Young *Shanghai*

- Visited and interviewed the participating enterprises of Fudan - E&Y Most Potential Enterprise Contest Awards & Extracurricular Activities.

SKILLS

Computer Languages	Pascal, C Language, SAS, R, Julia, Stata, Python, Mathematica, Matlab, Stata, SQL
Softwares	Photoshop, Premiere, Flash, Office