Xian Lyu

Cell: +86 13859999468; Email: lyuxian@ruc.edu.cn

Education

Renmin University of China **09/2021 – 07/2023**
M.S. in Applied Statistics, Institute of Statistics and Big Data, GPA: 3.99/4.0 *Beijing, China*

Xiamen University **09/2017 – 06/2021**
B.S. in Statistics, School of Economics, GPA: 3.89/4.0, Rank: 3/42 *Xiamen, China*

Experience

Tongji Hospital & National Health Commission of the PRC **07/2021 – 09/2021**
Data Analyst (Stata) *Beijing, China*

- Preprocessed 4 datasets (size of each dataset is $10^5 \times 10^2$) from National Health Service Surveys in 2003, 2008, 2013, and 2018 to unify the variables in different years, and used latent variable analysis to generate an SES(socialeconomic status) variable for each dataset.
- Calculated the age-gender standardized disease rate for several neurological diseases (stroke, Parkinson, etc.) in each year, and tested the trend between disease rates and years using generalized CMH test.
- Identified possible influencing factors of different neurological diseases using logistic regression.

Research Projects

Sharing Platform for Aging and Health Data Analysis **09/2021 – Now, In process**

Research Assistant, Renmin University of China

- Defined an index of aging trend and wrote several general functions in R to calculate and visualize the index.
- Detected the changing point of aging trend using restricted cubic spline and sliding window.

Aging Biomarkers of Chinese Healthy People **03/2022 – Now, In process**

Research Assistant, Beijing Hospital & Renmin University of China

- Selected aging biomarkers through high-dimensional protein data using a two-step procedure. R package Limma and EdgeR were used first to select possible biomarkers, following the BootstrapLasso and Bestsubset method to select a smaller number of meaningful aging biomarkers.
- Clustered the biomarkers based on their profiles (fitted using LOESS) and identified the biomarkers' aging trend.

One-way Allocation Problem **06/2022 – Now, In process**

Research Assistant, the University of Hong Kong

- Provided and proved an explicit solution to a baseline optimization problem regarding how to maximize the expected matches of demand and supply in a one-way node chain.
- Provided managerial properties of the solution and a polynomial-time algorithm to get the solution.

Technical Skills

Programming Languages: R, Python, C++, Stata
Tools and Frameworks: Git, LaTeX, Pytorch, Rcpp

Selected Awards

- 2018, Chinese National Scholarship (top 0.2%)
- 2019, First prize in National College Students Mathematical Modeling Competition (Fujian division)
- 2021, Outstanding Graduate of Xiamen University
- 2021-2022, The First Prize Scholarship in Renmin University of China

Others

- 2017-2019, Gold Medal in 3, 000-meter running in Xiamen University Sports Meeting (Women's)
- 2021, Gold Medal in C&d Xiamen Marathon for Xiamen University 100th Anniversary Special Race (Women's)