LUKE ZIPING XU

+86 18611396740 | pkuluke@gmail.com
https://zipingxu.github.io/about

EDUCATION

Peking University, Yuanpei College Beijing, China
BSc. Data Science *Sep 2014 – Jul 2018 (expected)*

- GPA: 3.65/4.00; admitted on the basis of top performance on national college admissions exam (12/527000)
- Selected awards: Lee Wai Wing Scholarship (top 5% of 250, awarded in 2015 for excellent academic performance); Merit Student (top 10% of 250, awarded in 2015 and 2017 for academic and social work); Second Prize for Jiangzehan Cup of Modeling Contest (2016); Second Prize at the Association for Computing Machinery Programming Contest in Peking University (2015)

WORK AND RESEARCH EXPERIENCE

Deepx Asset Management (an Artificial Intelligence Quantify private equity funds) Beijing, China
Quantitative intern to Dr. Jian Guo (company founder, former professor in Harvard Biostatistics) *July – Nov 2017*

- Developed new strategies on various financial derivatives such as stocks and futures
- Applied machine learning and statistical methods to study financial market
- Used python and C++ to implement and optimize a trading and simulation system of the stock market

Beijing Institute of Technology, School of Management and Economics Beijing, China
Research Assistant to Prof. Tianan Yang (Department of Human Resource Management) *Sep 2016 – Mar 2017*

Project: Calculating stress and health scores of an aging population

- Built a Rasch model and detected differential item function to achieve a reasonable health measurement
- Used multi-level models to study the relationship between health scores and demographic variables, and to analyze the implication of the results for policies on health and environment

Peking University, Guanghua School of Management Beijing, China
Research Assistant to Prof. Songxi Chen (Department of Commerce and Economic Statistics) *Mar 2016 –present*

- Working on three projects, responsible for statistical analysis, data crawling with Python, data cleaning with R, developing models, visualization with R

Project: Testing for climate change

- Designing a hypothesis-testing framework to test climate change in North China on gridded data and analyze its impacts on air quality
- Used parallelization tools, such as MPI and OpenMP, to accelerate computation of the standard deviation estimation, controlling for the false discovery rate to overcome the high dimension in gridded data
- The results will be published in a first author paper ([1] below)

Project: Heating effects assessment

- Built a nonparametric model to adjust the air quality with meteorological variables to allow a fair comparison between cities with and without heating in house.
- Used spatial and temporal bootstrapping methods to estimate the confidence interval

Project: Technical report on air-quality assessment in Beijing

- Created figures and wrote a section of the report which analyzed the effects of indoor heating provided by government on air quality in Beijing
- The report was read by over a hundred thousand members of the general public, and was consulted by government in relevant policy making decisions

PUBLICATIONS

[1] **Xu, Z.**, Chen, S. X. & Wu, X. (2017). Climate Change and Impacts on Air Quality in North China (Working paper)

[2] Zhang, S., Guo, B., Dong, A., He, J., **Xu, Z.**, & Chen, S. X. (2017). Cautionary Tales on Air-quality Improvement in Beijing. Proceedings of Royal Society A (Vol. 473, No. 2205, p. 20170457).

EXTRA-CURRICULAR ACTIVITIES

Seoul National University Seoul, South Korea
Under supervision of Prof. Xiaoru Yuan
(Department of Electrical Engineering and Computer Sciences, Peking University) *Apr 2017*
Institute of Electrical and Electronic Engineers: Pacific Visualization Symposium

- Selected to give a poster presentation on how wind affects air pollution in Beijing

- Developed a visualization tool with unity3D to explore the interaction between air pollution and wind, and presented the results in a video

Peking University, Yuanpei College Beijing, China
Vice - Minister of the college's Student Union *Sep 2015 – Jan 2016*

- Advertised activities and talks, designed posters for departmental lectures, organized two lectures on Sociology and Opera which received much attention in the university, and trained over 30 freshmen in Photoshop skills

ADDITIONAL INFORMATION

Research Interests

- Passionate about machine learning algorithms and statistics, interested in the application of quantitative method to real world problems

Computer Skills

- Skilled at R, MATLAB, Python (including using Python for data crawling), Photoshop and Office
- Familiar with JavaScript for web development
- Familiar with popular deep learning libraries such as Tensorflow and Keras

Languages

- Native Mandarin Chinese speaker, Fluent in English (TOEFL: 94/120; GRE: 322/340; IELTS: 7.5/9)

Selected Courses and grades

Advanced Mathematics (3.97/4)
Numerical Algebra (3.81/4)
Time Series Analysis (3.85/4)
Practice of Programming in C++ (3.81/4)
Deep Learning: Algorithm and Application (3.77/4)
Parallel and Distributed Computing (3.85/4)
Digital Image Processing (3.79/4)
Statistical Learning (3.98/4)
Introduction to Data Science (3.73/4)
Introduction to Computation (3.81/4)
Data Structure and Algorithm (3.95/4)
Network and Game Theory (3.98/4)
Visualization (3.95/4)