Lanfeng Pan

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Education

Ph.D., Iowa State University, 2012 – Now.

Master, Renmin University of China, 2010 – 2012.

Bachelor, Renmin University of China, 2006 – 2010.

Papers

PAN, L., LI, Y., HE, K., LI, Y. and LI, Y. (2016). Latent Gaussian Mixture Models For Nationwide Kidney Transplant Center Evaluation. *The Annals of Applied Statistics* (submitted).

LU, X., SI, J., **PAN, L.** and ZHAO, Y. (2011). Imputation of missing data using ensemble algorithms. *Fuzzy Systems and Knowledge Discovery*, 2011 Eighth International Conference on Shanghai. pp. 1312-1315.

Award

First Place in the 15th Annual Data Mining Cup, May 2014.

Analyzing online shopping data, predicting product returning probability given customer shopping records and item information. Our team achieved the lowest prediction error rate among challengers all over the world.

Work Experience

Research Assistant, August 2014 – Now.

Evaluating the performance of national wide kidney transplant centers. Clustering transplant centers based on their performance and detecting under performing and out performing while control the false discovery rate.

Intern at Novartis Pharmaceuticals, NJ, May 2015 – August 2015.

Project 1: Building `shiny` apps to help other statisticians to visualize and analyze their data.

Project 2: Modeling and visualizing labor investment in hundreds of pharmaceutical projects, predicting future labor investments and detecting projects that may consume a lot of resources.

Consultant at Agriculture Experiment Station Consulting Group, May 2014 – July 2014.

Helping researchers from other departments with their models and data analysis.

Teaching Assistant, August 2012 – May 2014.

Teaching assistant for various levels of Mathematical Statistics, from entry level to master level.

Presentation

PAN, L., LI, Y., HE, K., LI, Y. and LI, Y. (2015). Generalized Linear Mixed Model with Normal Mixture Random Effects. *Joint Statistical Meetings*. ASA. Seattle, WA, USA, Aug. 2015.

Research Interests

High Performance Computing

Multiple Testing, False Discovery Rate Control

Clustering, Subgroup Analysis

Missing Data Analysis

Nonparametrics

Skills

8 years experience with R

4 years experience with Julia

4 years experience with Linux Shell and git

Some experience with Python

Proficient with `shiny`, `ggplot2`, `knitr`, `rmarkdown` and LaTeX

Software Packages

`KernelEstimator.jl`. Implement kernel density estimation and kernel regression. In particular this package can deal with bounded kernel estimation using beta and gamma kernel and can choose bandwidth via cross valuation.

`LatentGaussianMixtureModel.jl`. Fit a Generalized Linear Mixed Model with Gaussian mixture random effects and decide the number of components for Gaussian mixture. And further conduct a multiple test to detect heterogeneity while controlling the False Discovery Rate.

`RFlavor.jl`. Implement a lot of useful and handy R functions in Julia. The purpose is to provide better statistical functions for Julia language as well as make it easy to translate R code into Julia.

`GaussianMixtureTest.jl`. Implement the Kasahara-Shimotsu Test to decide number of components in Gaussian Mixture Model.

`bignmf`. R package to solve the nonnegative matrix factorization problem using coordinate descent.

Contribute to Julia package `Yeppp.jl`. Port the `Yeppp!` library into Julia, significantly speeding up several basic arithmetic operations.

Contribute to several core statistical packages in Julia community including `StatsBase.jl`, `Rmath.jl`, `DataArrays.jl` and `KernelDensity.jl`.