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http://georglsm.r-forge.r-project.org/site-projects/
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OBJECTIVE

To build a career as **Statistician and Quantitative Analyst**, and apply my analytical, statistical and programming skills to solve challenging problems in predictive modeling, data mining, data management and analysis

SKILLS

Data Analysis and Modeling

- **Statistical modeling and diagnostics**: linear and logistic models, GLMs, GLMMs, and hierarchical models
- **Data mining methods and algorithms** for regression, classification, and clustering
- Statistical computing, Monte Carlo methods, and numerical analysis methods
- Time series, risk analysis, and stochastic process

Programming and Developing

- Proficient with **R, S-plus** and familiar with , C++, Matlab, Weka, SAS, Mathematica, Excel
- Proficient user of high-performance Unix cluster, Linux and Windows OS
- Working experiences on parallel computing and large data handling with R

EDUCATION

Ph.D. in Applied Statistics, University of Texas at San Antonio (UTSA), USA *12/2011*
M.S. in Physics, Indiana University at Bloomington (IUB), USA *06/2006*
B.S. in Physics, University of Science and Technology of China (USTC), China *06/2004*

EXPERIENCES

Hierarchical Model Estimation and Checking, Research Assistant, UTSA *08/2009 – Present*

- Analyzed spatial data and financial time series data with hierarchical predictive models
- Applied up-to-date robust Markov chain Monte Carlo algorithms for posterior sampling
- Explored a variety of Bayesian model checking and selection methods such as posterior predictive p-value
- Proposed a new model evaluation/checking method based on transformed residuals

Texas County Poverty Population Modeling, Research Assistant, UTSA *03/2011 – Present*

- Managed and manipulated data sets from multiple sources and GIS shapefiles
- Analyzed data with GLMs and GLMMs for county-specific covariates and spatially-correlated latent variables
- Evaluated model fitting, conducted model comparison, and derived relationship between poverty and demographic factors (county average income, race composition, age, etc.)

R/C++ Statistical Package for Hierarchical Models, Developer *02/2011 – Present*

- Developed package that performs posterior sampling, parameter estimation, response prediction, and model checking for hierarchical models with correlated latent variables
- Integrated C++ programs into R to handle Markov chain generation and large matrix computation
- Implemented parallel computing techniques to further speed up the process of estimation and prediction
- Hosted on R-Forge http://georglsm.r-forge.r-project.org/ and being submitted to CRAN

Instructor, College of Business, UTSA *01/2010 – 12/2011*

- Taught two undergraduate courses, *Business Statistics* and *Introduction to Statistics and Data Analysis*, which cover a wide range of fundamental statistical concepts; class sizes ranged from 30 to 60
- Mentored students with practical projects in their majors, for example training survey data analysis

Machine Learning for Automated Trading System, Developer *12/2010 – 02/2011*

- Pre-processed the time series index data: transformation and explanatory analysis
- Identified the importance of indicators with feature selection techniques as well as random forest algorithm
- Explored different predictive models, including neural network, classification tree and multivariate adaptive regression splines, and evaluated their performance
- Generated trading signals and evaluated the system with moving-window testing and Monte Carlo simulations

Analyst, Statistical Consulting Center, UTSA *09/2009 – 12/2010*

- Assisted local calling center to collect and analyze data for employee evaluation
- Designed experiments and conducted power analysis of one and two-way ANOVA models for clients

AWARDS AND HONORS

Travel Reward, Bayesian Biostatistics Conference, USA *2009*
Outstanding Student Scholarship, USTC *2000, 2002, 2003, 2004*
National Second Prize, Chinese Olympic Physics Contest *1998*
Hubei Province First Prize, Chinese Olympic Physics Contest *1998*
National Third Prize, Chinese Olympic Mathematics Contest *1992*