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## OBJECTIVE

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

## SKILLS

**Programming and Software**

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

**Quantitative, Analytical and Statistical Skills**

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

## EDUCATION

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

## EXPERIENCES

**Hierarchical Model Estimation and Checking, PhD Dissertation** *Aug 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 DIC, posterior predictive p-value, probability integral transform
- Proposed a new model checking method based on transformed residuals

**Texas County Poverty Population Modeling, Research Assistance, UTSA** *Mar 2011 – Present*

- Combined data sets from multiple sources and GIS shapefiles
- Fitted GLMMs with county-specific covariates and spatially-correlated latent variables
- Evaluated model fitting with Bayesian model checking methods and derived relationship between poverty and demographic factors (county average income, race composition, age, etc.)

**R Package Development for Hierarchical Models** *Feb 2011 – Present*

- Developed package that performs posterior sampling, parameter estimation and prediction, and model checking for hierarchical models with correlated latent variables
- Programmed C++ codes that interact with R to handle heavy computational tasks of Markov chain generation and large matrices computation
- Implemented parallel computing techniques to further speed up estimation and prediction
- Hosted on R-Forge `http://georglsm.r-forge.r-project.org/`

**Machine Learning for Automatic Trading System Development, CIFCO**[1] *Dec 2010 – Feb 2011*

- Obtained stock price data from MySQL server and pre-processed the data
- Explored different predictive models, such as neural network, projection pursuit regression and multivariate adaptive regression splines, and evaluated their performance
- Generated and evaluated trading signals from predictions

**Analyst, Statistical Consulting Center, UTSA** *Sep 2009 – Dec 2010*

- Conducted power analysis of one and two-way ANOVA models for clients
- Assisted local calling center to evaluate employees' performance

**Instructor, College of Business, UTSA** *Jan 2010 – Present*

- 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

## AWARDS AND HONORS

**Travel Reward,** Bayesian Biostatistics Conference, Houston *Jan 2009*
**Outstanding Student Scholarship,** USTC *2000, 2002, 2003, 2004*
**National Second/Third Prize,** Chinese Olympic Physics/Math Contest *1998/1992*

[1] CIFCO = China International Futures Company