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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
- Working experiences on parallel computing and large data handling
- Proficient user of high-performance Unix cluster, Amazon EC2 service, Linux and Windows OS

Quantitative, Analytical and Statistical Skills

- **Statistical modeling and diagnostics**: linear models, GLMs, GLMMs, and hierarchical models
- **Data mining techniques** for regression, classification, and clustering
- Numerical analysis, Monte Carlo methods, and statistical computing
- 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
- Displayed results as a combination of numerical and graphical summaries

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*, to Sophomore, Junior and Senior; 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