YUCHEN WANG

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EDUCATION

Master of Arts in Statistics, University of Missouri, Columbia, Missouri **expected May 2015**
- GPA 4.0 with A+ in Probability Theory, Linear Models and Bayesian Analysis.

Bachelor of Science in Statistics, East China Normal University, Shanghai, China **June 2013**
- Took Coursera courses CS50, machine learning, high performance computing, etc.
- Nominated for best thesis: *Residual Control Charts based on semi-parametric regression models*

Minor in Computer Science, Shanghai Jiao Tong University, Shanghai, China **June 2013**
- – Covered all undergraduate curriculum of Computer Science. Thesis required.

RELEVENT EXPERIENCE

Research Assistant, University of Missouri, Columbia, Missouri **August 2014 – Present**
- The only research assistant in our graduate class; Collaborated with PhD students in different projects.
- Optimized a bayesian MCMC algorithm in Fortran for gene data. Reduced computation time from more than 3 hours to less than 20 seconds.
- Parallelized a large-scale Bayes factor computation program in Fortran using both OpenMP and MPI; Tuned for distributed computing on different kinds of high performance computing clusters.

Research Assistant, East China Normal University, Shanghai, China **July 2012 - June 2014**
- To apply my statistics knowledge and programming skills into practice, I joined a research team of statistical process control (SPC) in tobacco manufacturing as a part-time research assistant.
  - The only undergraduate student in a research team of 7 members consisting graduate students and faculties.
  - Experienced in analyzing read-world data from observational studies with problems such as measurement error and high-frequency data (GBs per hour).
  - Designed a model for controlling tobacco dehumidification process, which is the most critical and complicated control unit among all tobacco manufacturing processes.
  - Collaborated with both quality control team at the tobacco manufacturing factory and software engineering team of an IT company. The final quality control product could detect abnormalities of the manufacturing in advance so as to minimize the cost with failure products.
- With the SPC project moved into a new phase, the team expanded to 21 members. In the mean time, I was hired as a full-time research assistant after graduation and became the team leader.
  - Mentored 7 members in the team. Trained all new members about previously used models and programs.
  - Developed an R package for the project containing raw data, data cleaning routines, statistical algorithms and visualization tools. Programmed over 2,500 lines of R code for this project.
- To develop a GUI software as a product for a two stage randomized experiment project, I recruited 3 undergraduate students into the development of a statistical software with user interface.
  - Worked remotely with the rest of the team while I was studying abroad.
  - Developed the statistical algorithm in R; Designed the user interface and data visulization tools in Shiny.

RELATED SKILLS

Statistical Computing Highly skilled in R; Developer of several R packages (see my GitHub: @wangyuchen); Proficient in OpenBUGS for Bayesian computing; Profient in SAS; Familiar with SPSS.

General Purpose Programming Solid understanding of object-oriented programming with C++; Extensive scientific computing experience with Fortran; Experience with Java.

Specialities in Statistics Bayesian analysis; Spatial statistics; Machine Learning and Data Mining; Semi-parametric regression models for longitudinal data and Statistical Process Control.

Mathematical Modeling Profient in MATLAB through 3 Mathematical Contest i Modeling experience. Familiar with operations research techniques in LINGO.

Operating Systems Effective in Unix/Linux environment; Responsible for HPC cluster managerment at ECNU; Experience in parallel programming on linux clusters.