

# FEI LIU

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## Summary

- 5 years data analysis
- 7 years SAS programming experience, 1 year python
- results used by more than 4 research studies every year: impact

## Education

2008 – 2010 **George Washington University**, *M.S. in Statistics*, GPA 3.91/4.0.  
2004 – 2008 **China Agricultural University**, *B.S. in Mathematics*, GPA 3.30/4.0.

## Publications

*Framework Content Coverage Variation in NAEP: Grade 8 Mathematics and U.S. History*. Young Yee Kim, Fei Liu, Sharyn Rosenberg. In *The American Educational Research Association Annual Meeting, 2014*.

## Technical Skills

**Statistics:** multiple regression, logistic regression, ANOVA, categorical data analysis, multivariate data analysis, factor analysis, principle component analysis, generalized linear models, mixed model, hierarchical liner model, model-assisted sampling survey, variance estimation using Taylor series, Bootstrap, and Jackknife methodology

**Programming Languages:** proficient in SAS, specifically, its data step, STAT, PROC IML, Macro language, and PROC SQL; prior experience in R, STATA, SPSS, Matlab, and Python

**Operating Systems:** Mac OS X and Windows

**Databases:** MySQL

## Certifications

- SAS Certified Base Programmer
- SAS Certified Advanced Programmer
- Coursera Computing for Data Analysis

## Experience

11/10 – **Research Associate**, *American Institute for Research/MacroSys LLC*, Washington DC.

Present National Assessment of Education Progress (NAEP) project

- Conduct statistical analyses for technical reports and research studies using NAEP's large scale longitudinal database in SAS
  - Conduct technical review of NAEP data file, report and technical documentation for statistical, psychometric methodological accuracy
- Common Core of Data survey project (CCD)
- Create SAS code to review and edit preliminary data collected from the National Center for Education Statistics Common Core of Data nonfiscal Surveys and generated Excel output using SAS/BASE, Macros, PROC SQL and ODS. Imputed missing data item according to the requirement of client
  - Provide technical support in CCD report development and documentation creation
  - Conduct Ad-hoc research study and data request using CCD survey data

- 1/10 – 9/10 **Research Data Analyst Intern**, *Education Data and Policy Center, Academy for Educational Development*, Washington DC.
- Extract education indicators from household survey using STATA, SPSS.
  - Collect and Format data from global website, Checking data reliability.
  - Query data already housed in the database using MySQL.
  - Generating graph reports in EXCEL/VBA/Macro.
  - Participating in research discussion, recommending analytical methodologies, interpreting and presenting analytical results.
  - Validate data from StatCompiler to EPDC extraction using SAS/ Proc gplot/proc sql, merging data
- 1/09 – 5/09 **Teaching Assistant**, *George Washington University*, Washington DC.
- Intro. to Statistics, grading.
  - Statistical Modeling, Regression Analysis one-on-one tutoring.
- 11/07 – 1/08 **Statistical Programmer**, *China Agricultural University*, Beijing, China.
- Collected and analyzed experimental data in SAS.
  - Analyzed data with PROC FREQ, MEANS, UNIVARIATE, and PLOT.
  - Extracted data in DATA step from various data sources such as Excel, ACCESS and other PC data formats, SQL databases.
  - Manipulated large datasets in DATA step by using By-group processing, data combining and merging, and also using PROC SQL.
  - Produced summary reports by using PROC TABULATE and PROC REPORT, creating and retrieving user-defined formats.
- 6/07 – 8/07 **Research Assistant**, *China Agricultural University*, Beijing, China.
- Managing research databases.
  - Calculating sample size and power for pilot study of grant proposals.
  - Conducting parametric & non-parametric data analysis: Generalized Linear Model, MIXED Model, Survival Analysis, Factor Analysis, Structural Equation Model, Repeated Measures.
  - Imputing missing data and transforming data.

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## Awards

- 2013** Excellent Employee of the Year, MacroSys LLC
- 2007** 3rd Prize Academic Scholarship, China Agriculture University
- 2006** 3rd Prize Academic Scholarship, China Agriculture University
- 2005** 1st Prize for Beijing Undergraduate Art Contest in Dancing, China

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## Selected Courses

### Data Analysis