

FEI LIU

1600 South Eads Street
Apartment 316N
Arlington, Virginia 22202

Phone: +1 313-320-4960
liufei8643@gmail.com
<https://www.linkedin.com/in/liufei15>

Summary

- 5 years professional experience in quantitative analysis and statistics inference
- 5 years statistical programming experience using SAS
- Provided school data to meet quick turn-around data request 3 - 4 times a year from prominent clients like New York Times, Washington Post, U.S. News, State of the Union Address, and Department of Education.
- data cleaning and reporting for 8 CCD fiscal and non-fiscal data collections annually.

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, **A/B and Multivariate test**, categorical data analysis, multivariate data analysis, factor analysis, principle component analysis, generalized linear models, mixed model, hierarchical liner model (HLM), 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 Python, R, STATA, SPSS, **SQL**, and Matlab

Operating Systems: Mac OS X and Windows

Databases: MySQL

Certifications

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

Experience

1/12 – Present **Statistical Analyst/SAS Programmer**, *American Institute for Research/MacroSys LLC*, Washington DC.

National Assessment of Education Progress (NAEP) project: NAEP's long-term trend data is the largest nationally representative and continuing assessment of America's student academic progress in various subject areas.

- Utilized factor analysis and multiple linear regression with fixed and random effect to predict difficulty of Grade 4 and 8 reading items with Coh-Metrics factors.
- Implemented bootstrap re-sampling method to create 10,000 hypothetical assessment samples to determine Mathematics and History framework content coverage variability. Validated results with the most recent 5 assessments.
- Analyzed complex multi-stage survey data, using techniques such as variance estimation using Jackknife, bias analysis using Chi-square test, t-test, multiple comparison, and HLM.

11/10 – **Statistical Analyst/SAS Programmer**, *American Institute for Research/MacroSys LLC*, Washington DC.

Common Core of Data (CCD) survey project: CCD is the national statistical database of all public elementary and secondary schools and school districts, containing data designed to be comparable across all states.

- Implemented review tests to ensure data integrity, accuracy and consistency; developed SAS programs with SAS/Base, SAS/Stat, Macro, Proc sql, and ODS for data documentation and reporting.
- Conducted multicollinearity diagnostics and identified correlations between CCD items to reduce reporting burden.
- Summarized big data (how big) with descriptive statistics and presented them in easily-understood figures and tables.

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

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.

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

Selected Courses

Data Analysis