

Education

Ph.D. in Social Science, University of California at Irvine, Irvine, CA, September 2015.

- Research on cognitive models and calibration methods for aggregating small, constrained, problematic survey data.

B.S. in Computer Science, Brown University, Providence, RI, 2002.

Data management, acquisition, and reporting

- Initiated pre- and post-session assessment of donation-supported summer school with online surveys.
- Designed and conducted computer- and paper-based memory experiments for doctoral thesis.
- Recruited and recorded a focus group to better understand usage of a mobile phone application.
- Improved and maintained a best-in-class volunteer management and real-time network monitoring systems using computer-generated SQL.
- Reduced cheating on experiments with custom randomized question orders.
- Wrote a Java-based web crawler to retrieve and archive image data from a website.
- Wrote numerous utility shell scripts (Linux, Unix, sh, bash, DOS) to schedule and run reports.
- Created novel visualizations of R data.frame objects using R ggplot2.
- Automated reporting using R Markdown, Knitr, and Sweave to deliver repeatable, annotated analyses.

Analyses, technologies, and statistical training

- Published an algorithm used to detect clusters of similar survey responses in small pools of subjects.
- Identified most and least reliable experimental subjects using Bayesian Graphical Models implemented in WinBUGS / JAGS via R and Matlab scripts.
- Improved estimated forecasts from groups of experts given test-retest data.
- Statistical methods and coursework include: Multivariate Regression, Generalized Linear Models, Bayesian inference, analysis and model selection.
- Taught undergraduates the use of ANOVA and Linear, Multiple, Logistic Regressions in SPSS.
- Technologies: SPSS, R, MS Office, OpenOffice/LibreOffice, Google Docs/Drive, OpenSesame, Linux/Unix/Ubuntu, Windows, Mac OS, version control and bug/issue tracking systems.
- Computer Languages include: R (including lm, glm, plyr, knitr, reshape2, ggplot2, rjags), Java, SQL, C, C++, Perl, Matlab, Python, PHP, HTML, XML, LaTeX, Markdown.

Communication and teaching

- Extensive teaching experience using multiple modes and styles (20 quarters as a Teaching Assistant).
- Conducted training sessions on features of a volunteer management system that resulted in reduced demands on technical support.
- Wrote specification documents to communicate product details to software engineers.
- Wrote marketing "personas" and stories to share ideas for a GPS navigation product with the CEO.
- Led diverse groups of five to forty volunteers to paint schools, clean parks, and sort food under the conditions of uncertain supplies, staffing, and weather.
- Reviewed, recommended, and installed a trouble ticket system that increased responsiveness and reliability for our small team's technical support over email and phone.
- Ad-hoc reviewer for Psychometrika, Field Methods, and IEEE Transactions on Computational Social Systems journals and for annual conference on Social Computing, Behavioral-Cultural Modeling, and Prediction.

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Diversity, privacy, and student success

- Certified LGBTQ Safe Zone Ally for students and peers.
- Training in FERPA, HIPAA, and IRB Human Subjects Protocols.
- Teacher training regarding: Retention, Disabilities, Writing, and Managing Participation.

Employment history

- Graduate Teaching Assistant, University of California at Irvine, Irvine, CA, Sep 2008 - Aug 2015.
- Teaching small-class sections and labs, editing essays, grading, tracking student progress, holding office hours, responding to and interacting with students one-on-one. Teaching includes: Statistics, SPSS, Economics, and Psychology.
- Research Analyst Intern, RAND Corporation, Santa Monica, CA, Jul 2010 - Oct 2010.
- Literature review, statistical programming, and reporting.
- Corporate Service Projects Leader, Hands On Bay Area, San Francisco, CA, Jul 2007 - Mar 2008.
- Managed groups of volunteers of varying skill levels, surveyed potential volunteers as part of sales process, scheduled deliveries and pickups of supplies, delivery and pickup of supplies, cleanup. Interfaced with the volunteer site staff and the volunteers.
- Technology Manager and Software Engineer, Hands On Network, San Francisco, CA, Jul 2006 - Apr 2007.
- Web software and database programming for service used by more than 40 nonprofit clients and the public to connect volunteers with opportunities. Wrote feature specifications. Introduced productivity tools to coordinate efforts of our team across two locations, leading to improved customer service. Led product training and provided direct customer support.
- Teacher, Sylvan Learning, San Bruno, CA, Apr 2006 - Jul 2006.
- Tutored three students at a time in math and writing.
- Product Manager, WaveMarket, Inc., Emeryville, CA, Oct 2005 - Jan 2006.
- Coordinated prototype application development for use on wireless phones and the web. Determined and specified feature requirements, product roadmap and design mockups.
- Software Engineer, SensAble Technologies, Inc., Woburn, MA, Nov 2003 - Aug 2005.
- Collaborated on interactive features to combine three-dimensional models in a unique industrial design application. Analyzed feasibility of customer workflows while designing and implementing prototype software.
- Software Engineer, Nexvu Technologies, Inc., Naperville, IL, Nov 2002 - Nov 2003.
- Java programming for network traffic monitoring appliance, SQL database storage of network traffic.