

# Olivia C. Lau

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## WORK HISTORY

- Google** Mountain View, CA  
*Staff Product Analyst, Search Data Science & Engineering* 2019 - Present
- As Search Exec Staples lead, I provide a consistent, informative view of key business trends to Search VPs. I work cross-functionally with engineering teams from features to logging to data engineering to ensure data quality; and present concise, consistent explanations to influence org-level product direction.
  - Live metrics analyst lead for Search, including Google-level targets, cross-product targets, SVP-level quarterly business reviews, and Search traffic anomaly investigation
- Senior Product Analyst, Search Data Science & Engineering* 2015 - 2019
- Managed an on-call rotation of 12-16 analysts to investigate traffic and logging anomalies
  - Thinking out of the box: Originated separate cross-product collaborations with Android, YouTube, and Display Ads
- Senior Quantitative Business Analyst, Small and Medium Business Sales* 2012 - 2015
- Employed propensity score matching to estimate program revenue impact
  - Built system of machine learning models to identify top spending accounts within 7 days of signup, deployed to markets covering 85% of AdWords revenue
- Senior Strategist, Product Quality Operations* 2011 - 2012
- Developed histogram distance measure approach to identifying accounts with high fraud potential
  - Designed and implemented regression-based model to identify trustworthy accounts
- Food and Drug Administration** Silver Spring, MD  
*Senior Statistician, Office of Planning and Informatics, CDER* 2009 - 2011
- Evaluated FDA's regulatory performance under the Prescription Drug User Fee Act
  - Designed and executed statistical study comparing FDA and the European Medicines Agency
  - Managed a \$600,000 HHS-level contract to study multiple chronic conditions
- Statistical Reviewer, Office of Biostatistics, CDER* 2008 - 2009
- Evaluated Phase III and Phase IV patient-level clinical trials data for efficacy and safety
- AES Consulting, LLC** (currently Compass Lexecon) San Francisco, CA  
*Research Associate* 2001 - 2002

## EDUCATION

- Harvard University** Cambridge, MA  
**A.M., Statistics** June 2006  
**Ph.D., Political Science** (concentration in statistical methods) June 2008
- Courses: Bayesian data analysis, hierarchical (multi-level) models, causal inference and experimental design, survival risk analysis, general linear models, and exploratory data analysis
- Stanford University** Stanford, CA  
**A.B., Economics; History** (with high honors) June 2001
- Awards and honors: Phi Beta Kappa, Omicron Delta Epsilon, Stanford-in-Washington Fellow, undergraduate research grant for fine art photography, Stanford-in-Oxford

## **PUBLICATIONS / STATISTICAL SOFTWARE**

Olivia Lau and Ian Yohai. “Using Quantitative Methods in Industry.” *PS: Political Science & Politics*, vol. 49, no. 3 (July 2016), pp. 524-526 (link)

Olivia Lau. “Book Review: Data Science in R: A Case Studies Approach to Computational Reasoning and Problem Solving by Deborah Nolan and Duncan Temple Lang.” *Journal of the American Statistical Society*, vol. 111, no. 513, pp. 441-442 (link)

Jonathan Wand, Gary King, and Olivia Lau. “Anchors: Software for Anchoring Vignette Data.” *Journal of Statistical Software*, vol. 42, no. 3 (June 2011), pp. 1-25  
Software available as anchors on CRAN

Kosuke Imai, Gary King, and Olivia Lau. “Toward a Common Framework for Statistical Analysis and Development.” *Journal of Computational and Graphical Statistics*, vol. 17, no. 4 (December 2008), pp. 892-913  
Software available as Zelig on github

Olivia Lau, Ryan T. Moore, and Michael Kellermann. “eiPack: R C Ecological Inference and Higher Dimension Data Management.” *R News*, vol. 7, no. 2 (October 2007), pp. 43-47  
Software available as eiPack on CRAN

## **SELECTED PRESENTATIONS AND COURSES TAUGHT**

- Statistics.com: “Intermediate R Programming” and “Advanced R Programming”, 2012-2019
- Short Course: “A Crash Course in R Programming”
- Plenary Talk: “Toward a Common Framework for Statistical Analysis and Development.” Directions in Statistical Computing, Auckland University, New Zealand, 2007. Earlier version presented at 2006 UseR! Conference, Wirtschaftsuniversität Wien, Vienna, Austria
- Presentation: “Ecological Inference and Higher-Dimension Data Management.” UseR! Conference, Wirtschaftsuniversität Wien, Vienna, 2006
- Head Teaching Fellow: “Advanced Political Methodology” (Prof. Gary King), 2004

## **PROFESSIONAL SERVICE**

- Executive editor, *The R Journal*, 2018-2019
- Organizing committee, 2016 UseR! Conference
- Organizing committee, 2010 UseR! Conference
- Program committee, 2007 UseR! Conference
- Reviewer, *Journal of the Royal Statistical Society, Series A*
- Reviewer, *Computational Statistics*
- Reviewer, *Journal of Politics*

## **SKILLS AND CERTIFICATIONS**

- 10+ years experience with R / S-plus, including open-source package development
- 10+ years experience with cloud computing
- Expert SQL and Google Workplace suite

References available upon request.