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# Jonathan P. Olmsted

## Experience

**The NPD Group, Inc.** | Manager, Solutions *Jan 2016 – present*; Specialist, Solutions *Jan 2015 – Dec 2016*

- Design, execute, and present diverse client projects: including matched-market testing, pricing analysis, forecasting, and survey projections
- Develop and document internal best practices for data–intensive and computationally–intensive market research methodologies

**Princeton University** | Senior Statistical Research & Computing Specialist *January 2013 – December 2014*

- Manage team of consultants providing services to faculty, staff, and student researchers in quantitative social science
- Develop and automate internal logging, tracking, and reporting system for consulting services
- Provide sustained, in-depth statistical and computational support for special projects — ranging from parallel algorithm development to web-scraping
- Train researchers on implementing computationally intensive procedures on workstation and high-performance computing hardware

**Princeton University** | Summer Lecturer *Summers 2013, 2014*

- Co-develop and teach new undergraduate course Visualizing Data to incoming freshmen using R
- Covers: causality, clustering, regression, cross-validation, network data, and geographical data
- Highest student evaluations among recent introductory statistics courses at Princeton University

## Technical Skills

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|---|---|
| Languages | R, C++, Python, Bash |
| OS Environments | Unix-like, Mac OS, Windows OS |
| Data Management | SQL/relational, NoSQL |
| Document Preparation | LaTeX, Pandoc, knitr |
| Software Project Management | git, svn, make |
| Other Technical Software | JAGS, stan, Matlab, Stata |
| HPC APIs | OpenMP, BLAS, MPI |
| Misc. | PBS, SLURM, Linux server and cluster admin. |

## Education

**University of Rochester** | Ph.D., Political Science *Expected 2017*; MA, Political Science *2010*

**University of Delaware** | BA, Political Science *2007*

## Publications

Fast Estimation of Ideal Points with Massive Data

with Kosuke Imai and James Lo. *American Political Science Review*, Forthcoming.

A Process for Developing an Optimal Model for Reducing Bias in Nonprobability Samples: The Quest for Accuracy Continues in Online Research

with George Terhanian, John Bremer, and Jiqiang Guo. (2016). *Journal of Advertising Research*, Vol. 56, No. 1 (February), pp. 14-24.

## Technical Workshops

| | |
|---|---|
| Visualizing Data | Dartmouth College *Summer 2014* |
| Advanced Statistical Programming | Princeton University *Springs 2013, 2014* |
| Intro to HPC | Princeton University *Winter 2013* |

## Software Projects

**emIRT** | R package

- Provides Variational Expectation-Maximization algorithms for Item Response Theory (IRT) models
- Fast and scalable computation, producing effectively equivalent results as other estimation techniques

**RcppTN** | R package

- Provides efficient random number generation, moment calculation and entropy calculation for truncated Normal distributions
- Identical R and C++ APIs for seamless and reproducible use by other projects at multiple levels