

LAWRENCE LO

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Data Scientist

- Extensive knowledge of a variety of statistical platforms and methodologies.
- Computational skills in a wide variety of utilities such as data management and visualization
- Experience working with research teams and communicating findings within team discussion, conference presentation, and scientific publication contexts

Key Skills

- R, Python, Matlab, SAS, and SQL programming
- Time series analysis and prediction/forecasting
- Machine learning
- Bayesian inference and MCMC methods
- Database management
- Psychological and aptitude testing
- General statistical methodology
- Principal component analysis, factor analysis, and other data reduction techniques
- Research design and survey construction
- Webscraping
- Dashboards (Shiny and PowerBI)
- Data visualization and graphics programming
- Public speaking and conference presentation experience
- Experience working within research teams
- Scientific writing and publication
- Statistical teaching and training

Experience

Data Science Foundry, Minneapolis, MN 2017 to Present

Freelance Data Scientist, 2017 to present

- Statistical consulting for various social science and business-related projects
- Development of additional technical expertise in multiple programming languages and data science methodologies

The Pennsylvania State University, University Park, PA 2010 to 2016

Research Assistant, 2010 to 2016

- Worked with psychologists, neuroscientists, and engineers on various research projects as a statistician.
- Involved in research projects from design phase to data collection, analysis, and dissemination through conference presentations and scientific journal publications

Teaching Assistant, 2013 to 2016

- Taught courses on statistics and psychological research methods at undergraduate and graduate level
- Ran several short-term workshops showing various statistical methods to people of diverse educational backgrounds

Education

- Ph.D. in Human Development and Family Studies at the Pennsylvania State University (2016)
- M.S. in Human Development and Family Studies at the Pennsylvania State University (2013)
- B.A in both Psychology and Philosophy at the University of Minnesota (2009)

Selected Publications

- Lo, L.L., Molenaar, P.C.M., Rovine, M. (2016). Determining the number of factors in P-technique factor analysis. *Applied Developmental Science*, 21, 94-105.
- Molenaar, P.C.M. & Lo, L.L. (2013). Dynamic models of biological pattern formation have some surprising implications for understanding the epigenetics of development. *Advances in Child Development and Behavior*, 45, 1-18.
- Molenaar, P.C.M. & Lo, L.L. (2012). Dynamic factor analysis and control of developmental processes. In: B. Laursen, T.D. Little, & N.A. Card (Eds.), *Handbook of developmental research methods*. New York: Guilford Press, 333-349.
- Rovine, M., & Lo, L.L. (2012). Issues and perspectives in person specific time series models. In B. Laursen, T. Little, & N. Card (Eds.), *Handbook of Developmental Research Methods*. New York, NY: Guilford.

Selected Conference Presentations

- Lo, L.L., Molenaar, P.C.M., Rovine, M., & Ram, N. (2013, April). *An Application of the Hybrid Kalman Filter to Ecological Momentary Assessment of Interpersonal Relations*. Poster presented at the Society for Research on Child Development in Seattle, Washington.
- Lo, L.L., Molenaar, P.C.M., Rovine, M. (2012, July). *The Hybrid Kalman Filter and its Application to Ecological Momentary Assessment Designs*. Paper presented at the International Meeting of the Psychometric Society in Lincoln, Nebraska.
- Lo, L.L., Loken, E. (2012, July). *Diffusion Models of Response Times for Implicit Association Tests*. Poster presented at the International Meeting of the Psychometric Society in Lincoln, Nebraska.
- Lo, L.L., Molenaar, P.C.M., Rovine, M., & Ram, N. (2012, February). *Modeling Dynamics in Unequally Spaced Data*. Paper presented at the Society for Research on Child Development (Special Topics: Research Methodology) in Tampa Bay, Florida.
- Lo, L.L., Rovine, M., Liu, S., Koslaski, K. (2011, November). *EZcurve: An Automated Program for Modeling Growth Curves*. Poster presented at the Gerontological Society of America in Boston, Massachusetts.
- Lo, L.L., Molenaar, P.C.M. (2011, July). *Brute-force Search Algorithms for fMRI Effective Connectivity Analysis*. Paper presented at the International Meeting of the Psychometric Society in Hong Kong, China.
- Lo, L.L. & Baldridge, A. (2008, July). *Affective oddballs: Psychophysiological measures in picture viewing*. Presented at the University of Minnesota Undergraduate Research Symposium, Minneapolis, Minnesota.