



Paul E. Johnson, Ph.D.

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Academic Curriculum Vita: [PDF](#)

Skills

I am a “full stack data scientist”. I’ve been doing the work of data engineers and data scientists for a long time. I’d like to work in a Linux-oriented research position. I’ve set up Linux computing labs and compute clusters. A primary focus in the past few years has been the formalization of team projects with software packages (RedHat, Debian, R, Python) and version management tools. I’ve been involved in many statistical research projects, acting as a manager for a decade. While at KU, I administered contract projects with many external entities. I enjoy teaching and mentoring others, whether in formal workshops or in informal team settings.

Data Science

- Data Management (ETL, SQL)
- Statistical Estimation (Econometrics)
- Machine Learning

Statistics

- Regression analysis
- Hierarchical (multilevel) models
- Structural equations

High Performance Computing

- Linux cluster administration
- Azure cloud VM
- Parallel computing / Spark

Programming Expertise

- Python & R
- C / Objective-C

Document Preparation

- LaTeX
- Markdown

Education

1988 Ph.D. Political Science
Washington University in St. Louis

1983 M.A. Political Science
University of Iowa

1981 B.A. Political Science &
Communications
University of Kansas

Experience

2022 – Manager, Lead Data Scientist, H&R
Block Machine Learning Lab

- Data engineering development
- Implementation of production systems
- Python project design; Agile projects
- Azure DevOps, Databricks

Oct. 2020-2022 Senior Data Scientist, H&R
Block Machine Learning Lab

- Python & R development
- SQL & Spark; database ETL
- Implementing Git workflows
- Fraud detection, uplift calculations
- IBM Cloud Pak 4 Data
- Azure, Databricks

July 2019 - Sept. 2020, Principal Data
Scientist, TeraCrunch, Inc.

- Project manager
- DevOps: Azure cloud VM deployment, server administration

2013–2019 Director, Center for Research Methods and Data Analysis, University of Kansas

- Hire, train & supervise staff
- Project planning, management, accounting and billing
- Director, Summer Statistical Institute
- Software development: R packages *rockchalk*, *kutils* and *stationery*.

2009–2013 Associate Director, Center for Research Methods and Data Analysis, University of Kansas

- Supervisor of high performance computing
- Research project leader

1987–2009 Professor, Political Science, University of Kansas

- Statistical computing (Linux, Git, LaTeX, Cluster computing)
- US politics
- Online course materials: <http://pj.freefaculty.org/guides>

1990–1991 School of Management, Yale University, Visiting Professor

- Regression Analysis
- Political economy

Selected Publications

- 2017 *Mathematics: Old and New* (Dover)
- 2013 Monte Carlo Analysis in *Oxford Handbook of Quantitative Methods*
- 2005 Taking the Keys from Grandpa, *Review of Policy Research*
- 2004 *Political Disagreement: The Survival of Diverse Opinions in Social Networks* (Cambridge University Press)
- 1998 *Social Choice: Theory and Research* (Sage)
- 1995 Unraveling in a Variety of institutional Settings, *Journal of Theoretical Politics*
- 1990, 1994 *American Government: People, Institutions and Policies* (Houghton Mifflin)
- 1990 Unraveling in Democratically Governed Groups, *Rationality & Society*

Awards

- 2008 Kemper Fellowship for Excellence in Teaching
- 2005 *Political Disagreement* named *Book of the Year* in Political Communications
- 1998 NSF Award: Modeling Interest Groups with Swarm

Management Innovations

- Project-oriented research management (CRMDA-billing, project management)
- Software packaging for teamwork (Debian & RedHat Linux, Python, R)
- Pioneered formalization of research with Git at KU and H&R Block

High Performance Computing

- Established a compute cluster (480 cores) for use by students and faculty of the College of Liberal Arts and Sciences
- Created manuals and supervised training workshops for parallel computing: <http://crmda.ku.edu/computing>

Specialty: Automated Report Generation

- Developed software to create customized reports for several clients
- Programs provided integrated text and illustrations for hundreds of regions or thousands of individuals
- The programs have been used by government departments at the federal and state levels

References

Please see the “Consulting Project Highlights” which provides contact information for references while I worked at KU.

Thomas Brawner, Staff Data Scientist, Clean Energy. thomasbrawner@gmail.com

Will Self, Data & Analytics Executive, Mercer (formerly H&R Block) william.self@gmail.com

Center for Research Methods and Data Analysis
Paul E. Johnson, Director
April 10, 2019

Consulting Project Highlights

The larger projects on which we have worked from 2013-2019:

1. CGI Federal, Inc (U.S. Army TRADOC). Data importation and report generation with public opinion surveys. Security clearance required (contact: Kirk Taylor).
2. Department of Health and Environment, State of Kansas. Data importation and normalization for hospital, health, and environmental monitoring stations (contact: Farah Ahmed).
3. School of Social Welfare, University of Kansas. Data importation and alignment, Survey of Income Program Participation (contact: Terri Friedline).
4. Dynamic Learning Maps, Achievement and Assessment Institute, University of Kansas. Educational diagnostics and report generation (contact: Brooke Nash).
5. School of Public Affairs and Administration, University of Kansas. Data integration and missing value imputation for multi-city project on renewable resources (contact: Rachel Krause)
6. Center for Study of Injustice, Institute for Policy & Social Research. AHSTI: Anti-Slavery and Human Trafficking Initiative (contact: Hannah Britton).
7. School of Public Affairs and Administration, University of Kansas. Data integration for the Heart-land multi-university opinion research assessment on Sexual Assault on American Campuses (contact: Alesha Doan)
8. School of Social Welfare, Appalachian St. University. Longitudinal analysis of Panel Study of Income Dynamics (contact: Leah Hamilton).
9. College of Human Ecology, Kansas State University. Data alignment and analysis for gerontological research on attitudes toward elderly in nursing home care (contact: Maggie Syme)

Client/Reference Contact Information

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