

Zachary M. Jones

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Employment

Senior Applied/Data Scientist, *Amazon*, 2023–.

Senior Research Scientist, *Meta*, 2021-2023.

Senior Analyst, *Institute for Health Metrics and Evaluation*, 2019-2021.

Moore/Sloan Data Science Postdoctoral Fellow, *University of Washington*, 2017-2019.

Education

Ph.D. Political Science, *Pennsylvania State University*, 2017.

M.A. Political Science, *University of Georgia*, 2013.

B.A. Political Science and Philosophy, *Georgia Southern University*, 2010.

Research

Peer-Reviewed Publications

1. [mmpf: Monte-Carlo Methods for Prediction Functions](#), *The R Journal* (2018), Zachary M. Jones.
2. [Is There More Violence in the Middle?](#), *American Journal of Political Science* (2018), Zachary M. Jones and Yonatan Lupu.
3. [edarf: Exploratory Data Analysis using Random Forests](#), *Journal of Open Source Software* (2016), Zachary M. Jones and Fridolin Linder.
4. [mlr: Machine Learning in R](#), *Journal of Machine Learning Research* (2016), Bernd Bischl, Michel Lang, Lars Kotthoff, Julia Schiffner, Jakob Richter, Erich Studerus, Giuseppe Casalicchio and Zachary M. Jones.
5. [Enhancing Validity in Observational Settings When Replication is Not Possible](#), *Political Science Research and Methods* (2016), Christopher J. Fariss and Zachary M. Jones.
6. [Human Rights Texts: Converting Human Rights Primary Source Documents into Data](#), *PLoS One* (2015), Christopher J. Fariss, Fridolin Linder, Zachary M. Jones, Charles Crabtree, Megan Biek, Ana-Sophia Ross, Taranamol Kaur, and Michael Tsai.
7. [An Empirical Evaluation of Explanations for State Repression](#), *American Political Science Review* (2014), Daniel W. Hill Jr. and Zachary M. Jones.

Working Papers

1. Estimating and Forecasting Lung Cancer by Histology and Stage, Zachary M. Jones, Tina Fitzmaurice, Serena Santonis.
2. [Interpretable Statistical Learning Methods](#), Zachary M. Jones.

Editor-Reviewed Publications

1. [Git/GitHub, Transparency, and Legitimacy in Quantitative Research](#), *The Political Methodologist* (2013).

Software

mmpf: Monte-Carlo Methods for Prediction Functions ([author and creator](#))

Contains functions which marginalize prediction functions (e.g., partial dependence) as well as functions to compute permutation importance.

mlr: Machine Learning with R ([author and contributor](#))

Interface to a large number of classification and regression techniques, including machine-readable parameter descriptions. There is also an experimental extension for survival analysis, clustering and general, example-specific cost-sensitive learning. Generic resampling, including cross-validation, bootstrapping and subsampling. Hyperparameter tuning with modern optimization techniques, for single- and multi-objective problems. Filter and wrapper methods for feature selection. Extension of basic learners with additional operations common in machine learning, also allowing for easy nested resampling. Most operations can be parallelized. n

edarf: Exploratory Data Analysis using Random Forests ([author and creator](#))

Functions useful for exploratory data analysis using random forests which can be used to compute multivariate partial dependence, observation, class, and variable-wise marginal and joint permutation importance as well as observation-specific measures of distance (supervised or unsupervised). All of the aforementioned functions are accompanied by ggplot2 plotting functions.

Invited Talks

1. [Interpretable Statistical Learning Methods](#), Zachary M. Jones, New Faces in Political Methodology, *Pennsylvania State University* (2018).
2. [Interpretable Statistical Learning Methods](#), Zachary M. Jones, *University of Colorado Boulder* (2016).
3. [Data Mining as Exploratory Data Analysis](#), Zachary M. Jones, *International Methods Colloquium* (2015).

Conference Presentations

1. [Inference on the Effects of Observed Features in Latent Space Models for Networks](#), Zachary M. Jones, *Society for Political Methodology* (2016).
2. [Inference on the Effects of Observed Features in Latent Space Models for Networks](#), Zachary M. Jones, *Political Networks* (2016).
3. Data Mining as Exploratory Data Analysis, Zachary M. Jones, *Society for Political Methodology* (2015).
4. [An Empirical Evaluation of Explanations for State Repression](#), Daniel W. Hill Jr. and Zachary M. Jones, *Peace Science Society* (2013).

Fellowships and Awards

Google Summer of Code Fellowship, [mlr: Machine Learning in R](#) (2015).

Jesse M. MacKnight Memorial Scholarship, *Pennsylvania State University* (2014-2015).

Robert W. Graham Endowed Fellowship, *Pennsylvania State University* (2013).

Carlos A. Pelanda Paper Award, *University of Georgia* (2011).

Teaching

1. Social Data Analytics, *Pennsylvania State University* (2016) (graduate).
2. Advanced Maximum Likelihood, *ICPSR Summer Program* (2014) (assistant).
3. Modern Warfare, *University of Georgia* (2012).

Service

Reviewing

The R Journal (1), *Journal of Politics* (5), *International Political Science Review* (1), *Political Science Research and Methods* (1), *American Political Science Review* (3), *British Journal of Political Science* (1), *Political Analysis* (3), *American Journal of Political Science* (2), *Journal of Conflict Resolution* (2), *Journal of Peace Research* (2), *Conflict Management and Peace Science* (2), *International Interactions* (2)

References

1. Bruce Desmarais: bdesmarais@psu.edu
Associate Professor of Political Science, *Pennsylvania State University*
2. Christopher Zorn: zorn@psu.edu
Liberal Arts Research Professor of Political Science and Sociology, *Pennsylvania State University*
3. Christopher J. Fariss: cjf0006@gmail.com
Assistant Professor of Political Science, *University of Michigan*

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