Kory D. Johnson

Vienna University of Economics and Business
Institute for Statistics and Mathematics
Welthandelsplatz 1
1020 Vienna, Austria
kory.johnson@wu.ac.at
https://korydjohnson.github.io/

Academic Positions

2020.9 - present **Vienna University of Economics and Business**
Institute for Statistics and Mathematics
Postdoctoral Research Fellow

2019.9 - 2020.9 **Vienna University of Economics and Business**
Institute for Statistics and Mathematics
Universitätsassistent (Assistant Professor, non-tenure track)

2016.9 - 2019.9 **The University of Vienna**
Department of Statistics and Operations Research
Universitätsassistent (Assistant Professor, non-tenure track)

Education

2011 - 2016 **The Wharton School, University of Pennsylvania**
M.A. Statistics; Ph.D., Statistics
Dissertation Title: *Discrete Methods in Statistics: Feature Selection and Fairness-Aware Data Mining*
Advisers: Professors Robert Stine and Dean Foster
Degree Conferred: May 16, 2016

2007 - 2011 **The Wharton School, University of Pennsylvania**
B.S. in Economics summa cum laude; Statistics, minor in Mathematics
The College of Arts and Sciences, University of Pennsylvania
B.A. summa cum laude with Distinction in Economics and Philosophy

Publications

Kory D. Johnson, Mathias Beiglböck, Manuel Eder, Annemarie Grass, Joachim Hermisson, Gudmund Pammer, Jitka Polechová, Daniel Toneian, and Benjamin Wölfl. Disease momentum: Estimating the reproduction number in the presence of superspreading, 2021. URL https://arxiv.org/abs/2012.08843. Forthcoming in Infectious Disease Modeling.

Danijel Kivaranovic, Kory D. Johnson, and Hannes Leeb. Adaptive, distribution-free prediction intervals for deep networks. In *The 23rd International Conference on Artificial Intelligence and Statistics, AISTATS 2020, 26-28 August 2020, Online [Palermo, Sicily, Italy]*, pages 4346–4356, 2020. URL http://proceedings.mlr.press/v108/kivaranovic20a.html.

Lawrence D. Brown and Kory D. Johnson. Comment. *Journal of the American Statistical Association*, 111(514):614–617, 2016. URL http://dx.doi.org/10.1080/01621459.2016.1182788.

Submitted

Jitka Polechová, Kory D. Johnson, Pavel Payne, Alex Crozier, Mathias Beiglböck, Pavel Plevka, and Eva Schernhammer. Rapid antigen tests: their sensitivity, benefits for epidemic control, and use in austrian schools, 2021. URL https://arxiv.org/abs/2103.04979.

K. D. Johnson, R. A. Stine, and D. P. Foster. Impartial predictive modeling: Ensuring group fairness in arbitrary models. *ArXiv e-prints*, 2020a. URL https://arxiv.org/abs/1608.00528.

Kory D. Johnson, Robert A. Stine, and Dean P. Foster. Fitting high-dimensional interaction models with error control. *ArXiv e-prints*, art. arXiv:1510.06322, Feb 2020b. URL https://arxiv.org/abs/1510.06322.

K. D. Johnson, R. A. Stine, and D. P. Foster. Submodularity in statistics: Comparing the success of model selection methods. *ArXiv e-prints*, October 2015a. URL http://arxiv.org/abs/1510.06301.

K. D. Johnson, D. Lin, L. H. Ungar, D. P. Foster, and R. A. Stine. A risk ratio comparison of l_0 and l_1 penalized regression. *ArXiv e-prints*, October 2015b. URL http://arxiv.org/abs/1510.06319.

In Preparation

Kory D. Johnson. Controlling fwer in stepwise regression using multiple comparisons. 2020.

Guido Gazzani and Kory D. Johnson. Conformal inference for multiclass roc curves. July 2020.

Christian Url and Kory D. Johnson. Asymmetric, distribution-free predictive intervals for quantile forests. March 2020.

Software

Kory D. Johnson. *lmimpartial: Impartial Estimates Using Linear Regression*, 2020. URL https://github.com/korydjohnson/lmimpartial. R package version 1.0.0.

Kory D. Johnson and Robert A. Stine. *rai: Revisiting-Alpha-Investing for Polynomial Regression*, 2019. URL https://github.com/korydjohnson/rai. R package version 1.0.0.

Presentations

Revisiting Alpha-Investing: mFDR Control in Polynomial Regression, December 2018. Computational and Methodological Statistics 2018. Pisa, Italy. **Invited Talk**.

Comment: Exact Post-selection Inference for Sequential Regression Procedures, November 2018. Larry Brown Memorial Workshop, Young Researcher Session. Philadelphia, USA.

Stopping Stepwise Regression with the Sequential Rejection Principle, September 2018. Royal Statistical Society 2018 International Conference. Cardiff, Wales. **Invited Talk**.

Sequential Testing for Inference During Model Selection, July 2018. Workshop on Model Selection, Regularization, and Inference. Vienna, Austria.

Controlling FWER in Stepwise Regression Using Multiple Comparisons, December 2017. Computational and Methodological Statistics 2018. London, England. **Invited Talk**.

Valid Stepwise Regression Using Sequential Testing, July 2017. Joint Statistical Meetings. Baltimore, USA.

Valid Stepwise Regression Using Sequential Testing, July 2017. Poster Session for IMS New Researchers in Statistics and Probability. Baltimore, USA.

Sequential Testing for Inference During Model Selection, March 2017. University of Vienna Department of Statistics and Operations Research. Vienna, Austria. Colloquium Presentation.

Sequential Testing for Inference During Model Selection, April 2016. Ph.D. Dissertation Defense. Philadelphia, USA.

Discrete Methods in Statistics: Feature Selection and Fairness Aware Data Mining, November 2015. Ph.D. Dissertation Proposal Defense. Philadelphia, USA.

Submodularity in Statistics, August 2015. Joint Statistical Meeting. Seattle, USA.

Submodularity in Statistics: Comparing the Success of Model Selection Methods, May 2015. Student Seminar Day. University of Pennsylvania.

Introduction to Submodularity, May 2014. Student Seminar Day. University of Pennsylvania.

In Defense of l_0: Greedy Feature Selection, April 2014. SIAM International Conference on Data Mining. Poster in Doctoral Forum. Phiadelphia, USA.

Revisiting Alpha Investing: Principled, Greedy Feature Selection, August 2013. Second Year Paper Presentation. University of Pennsylvania.

Exponential Smooth as an Approximate Half-Space Checking Rule, August 2012. First Year Paper Presentation. University of Pennsylvania.

Teaching Experience

Instructor: Lecturer

Winter 2021	Applied Econometrics
Summer 2020	Financial Mathematics
Summer 2020	Statistik (in German)
Winter 2018	Statistical Programming: Introduction to R
Summer 2018	Large-Scale Inference (master's level)
Winter 2017	Data Science Case Studies in R (master's level)
Summer 2017	Nonparametric Inference (master's level)
Summer 2015	Introductory Business Statistics

Instructor: Exercise Course

Summer 2020	Quantitative Methods II
Summer 2017	Statistical Inference
Winter 2016	Linear Models
Spring 2015	Introductory Statistics
Spring 2012	Introductory Statistics

Teaching Assistant

Spring 2016	Modern Regression for Social, Behavioral, and Biological Sciences
Fall 2015	Introductory Business Statistics II
Fall 2014	Introductory Business Statistics I
Spring 2014	Applied Econometrics II
Fall 2013	Intermediate Statistics
Spring 2013	Introductory Business Statistics I
Fall 2012	Applied Econometrics I
Fall 2011	Introductory Business Statistics II

Honors and Awards

5/2014	SIAM Student Travel Award. SIAM International Conference on Data Mining.
5/2011	Elected to Phi Beta Kappa. University of Pennsylvania.

Professional Development

10/2014	**Teacher Development Program II** Four module workshop to improve presentation and teaching skills.
5/2011	**Teacher Development Program I** Half-day workshop on communication skills.

Other Experience

7/2009 - 8/2009 *Marketing Intern*, Citibank Singapore. Singapore, SG.
9/2008 - 5/2009 *Consultant*, Wharton Small Business Development Center. Philadelphia, PA.

Technical Skills

- Extensive experience in R and LaTeX.
- Some experience in Python, Matlab, SQL, C♯, and VBA.

Other Interests

Rock climbing, splitboarding, and mountaineering.