

ADAM KAPELNER

2300 Lombard St 3F \diamond Philadelphia, PA, 19146

516-435-6795 \diamond kapelner@wharton.upenn.edu

RESEARCH INTERESTS

Statistical Learning, Sequential Experiments, Crowdsourcing, Biomedical Applications

ACADEMIC EMPLOYMENT

Queens College Aug 2014 - present
Assistant Professor of Mathematics

EDUCATION

Wharton School of the University of Pennsylvania Sept 2009 - May 2014
Ph.D. in Statistics under Abba Krieger and Ed George

Wharton School of the University of Pennsylvania May 2012
A.M. in Statistics

Stanford University June 2006
B.S. in Mathematical & Computational Science
(minors in Physics and Economics)

HONORS AND AWARDS

National Science Foundation Graduate Research Fellowship May 2010 - April 2013

J. Parker Bursk Memorial Award for Excellence in Research Dec 2013

Donald S. Murray Award for Excellence in Teaching Dec 2012

Intel Science Talent Search Semifinalist Jan 2002

PUBLICATIONS

Methodology

- Kapelner, A. & Krieger, A. (2014). Matching on-the-fly in Sequential Experiments for Higher Power and Efficiency. *in press, Biometrics*, available online
- Kapelner, A., Bleich, J., Cohen, Z. D., DeRubeis, R. J. & Berk, R. A. (2014). Inference for Treatment Regime Models in Personalized Medicine *submitted to Biometrics*, available on arXiv

Statistical Learning

- Kapelner, A. & Bleich, J. (2014). Prediction with Missing Data via Bayesian Additive Regression Trees. *in press, Canadian Journal of Statistics*, available on arXiv

- Bleich, J., Kapelner, A., George, E. I. & Jensen, S. T. (2014). Variable Selection Inference for Bayesian Additive Regression Trees. *in press, Annals of Applied Statistics*, available on arXiv
- Goldstein, A., Kapelner, A., Bleich, J. & Pitkin, E. (2014). Peeking Inside the Black Box: Visualizing Statistical Learning with Plots of Individual Conditional Expectation. *in press, Journal of Computational & Graphical Statistics*, available on arXiv
- Kapelner, A. & Bleich, J. (2014). **bartMachine**: A Powerful Tool for Machine Learning. *in resubmission review, Journal of Statistical Software*, available on arXiv
- Bleich, J. & Kapelner, A. (2014). Bayesian Additive Regression Trees With Parametric Models of Heteroskedasticity, *submitted to Bayesian Analysis*, available on arXiv
- Berk, R. A., Bleich, J., Kapelner, A., Henderson, J., Kurtz, E. (2014) Using Regression Kernels to Forecast A Failure to Appear in Court, *submitted to Journal of Quantitative Criminology*

Crowdsourcing

- Chandler, D. & Kapelner, A. (2013) Breaking Monotony with Meaning: Motivation in Crowdsourcing Markets. *Journal of Economic Behavior & Organization*, 90: 123-133
- Schwartz, H. A., Eichstaedt, J., Blanco, E., Agrawal, M., Dziurzyński, L., Kern, M. L., Kapelner, A., Park, G., Jha, S., Stillwell, D., Kosinski, M. & Ungar, L. H. (2013) Predicting People's Well-Being in Social Media: Multi-level message and user models of language use. *working paper*
- Kapelner, A., Kaliannan, K., Schwartz, H. A., Ungar, L. H. & Foster, D. P. (2012) New Insights from Coarse Word Sense Disambiguation in the Crowd. *CoLING*
- Kapelner, A. & Chandler, D. (2010) Preventing Satisficing in Online Surveys. *Proceedings of CrowdConf*

Biomedical Applications

- Kapelner, A. & Vorsanger, M. (2014) Starvation of Cancer via Induced Ketogenesis and Severe Hypoglycemia. *in press, Medical Hypotheses*, available on arXiv
- Chang, A. Y., Bhattacharya, N., Mu, J., Setiadi, A. F., Carcamo-Cavazos, V., Lee, G. H.; Simons, D. L., Yadegarynia, S., Hemati, K., Kapelner, A., Zheng, M., Krag, D. N., Schwartz, E. J., Chen, D. Z. & Lee, P. P. (2013) Spatial organization of dendritic cells within tumor draining lymph nodes impacts clinical outcome in breast cancer patients. *Journal of translational medicine*, 11(1): 242
- Setiadi, A. F.; Ray, N. C., Kohrt, H. E., Kapelner, A., Carcamo-Cavazos, V., Levic, E. B., Yadegarynia, S., van der Loos, C. M., Schwartz, E. J., Holmes, S. & Lee, P. P. (2010) Quantitative, architectural analysis of immune cell subsets in tumor-draining lymph nodes from breast cancer patients and healthy lymph nodes. *PloS one*, 5(8): e12420
- Holmes, S., Kapelner, A. & Lee, P. P. (2009) An interactive java statistical image segmentation system: Gemident. *Journal of Statistical Software*, 30(10): 1–20
- Kapelner, A., Lee, P. P. & Holmes, S. (2007) An interactive statistical image segmentation and visualization system. *in proceedings of IEEE, Medical Information Visualisation*

GRANTS

- U.S Department of Education, Institute of Educational Science**, Grant # R305A130467, \$1.5M, PI: Suzanne Adlof, University of South Carolina Sept 2013 - Sept 2016
- Helped conceive and write grant proposal and revisions for “Developing an Online Tutor to Accelerate High School Vocabulary Learning”
 - The tutor makes use of and licenses my DictionarySquared.com technology
 - Serve as an expert consultant to the grant

TEACHING EXPERIENCE

- Queens College, City University of New York** Aug 2014 - Dec 2014
Math 241 (Probability and Statistics)
- Wharton School of the University of Pennsylvania** May 2011 - July 2011
Course Lecturer for STAT 101 (Probability and Statistics), an undergraduate summer course
- Wharton School of the University of Pennsylvania** Sept 2009 - June 2010
Teaching Assistant for STAT 101 (Probability and Statistics) and Statistics 102 (Linear Regression)
- Wharton School of the University of Pennsylvania** Sept 2013 - Dec 2013
Teaching Assistant for STAT 613 (Required Statistics course for MBA students)
- Wharton School of the University of Pennsylvania** Jan 2014 - present
Teaching Assistant for STAT 112 (Statistical Inference)

PROFESSIONAL SERVICE

- Reviewer, *Annals of Applied Statistics* 2013
- Reviewer, *Transactions of the Association for Computational Linguistics* 2013
- Taught “How to Teach an Effective Summer Course” for Wharton graduate students 2012
- Reviewer, National Science Foundation (grants) 2010

PRESENTATIONS

- Kapelner A., Ungar L. Crowdsourcing for Statisticians. *JSM*, Continuing Education Course Aug 2013
- Kapelner A., Chandler D. Preventing Satisficing in Online Surveys. *CrowdConf* Oct 2010
- Wieland, K., Fitzgerald, J., Kapelner, A. Contextual Vocabulary Analysis Processes. *National Reading Conference* Dec 2009
- Kohrt, H. E., Kapelner, A., Holmes, S., Lee, P. P. An interactive statistical imaging system. *J Clin Oncol (Poster)* May 2008

INDUSTRY EXPERIENCE

DictionarySquared, Inc.
Founder & CTO

April 2010 - Present
San Francisco, CA

- Conceived and engineered a web application that teaches vocabulary via reading contextual snippets
- Wharton Business Plan Semifinalist Winner
- Applied and received federal grant money for research (see Grants section)

Eventbrite, Inc.
Software Engineer

April 2007- Aug 2007
San Francisco, CA

- First engineer. Conceived, designed, and built pieces of their web platform from scratch.

Stanford University, Lab of Peter Lee
Staff Scientist

June 2005 - Mar 2007
Stanford, CA

- Conceived and engineered software that finds objects in images, used to find cells in microscopic images. Uses Java-R programming, Random Forests and image processing

SOFTWARE

R Package: bartMachine

Statistical Learning Suite

R Package: ICEbox

Statistical Learning Visualization Suite

R Package: PTE

Inference for personalized medicine models

GemIdent

Finds objects of interest in images

DictionarySquared.com

Teaches High School Students Vocabulary

TECHNICAL STRENGTHS

Software Languages

R, Java, Ruby on Rails, C++, Python, HTML, CSS, JS

Other Skills

git, MySQL, Linux, simulation via grid computing