

MATT J. KUSNER

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EDUCATION

The Alan Turing Institute

Research Fellow
University of Warwick

August 2016 - Present

Cornell University

Visiting Ph.D. student in Dept. of Computer Science
Advisor: Kilian Q. Weinberger

August 2015 - August 2016

Washington University in St. Louis

Ph.D. from Dept. of Computer Science & Engineering
Advisor: Kilian Q. Weinberger

August 2011 - August 2016

Macalester College

B.A. in Computer Science, B.A. in Mathematics
Member of Phi Beta Kappa
Magna Cum Laude

September 2007 - May 2011

AWARDS

Turner Dissertation Award

Washington University in St. Louis
(awarded yearly to the best Ph.D. dissertation)

December 2016
St. Louis, MO

Konhauser Award for Mathematical Achievement

Macalester College
(awarded yearly to the top senior student in computer science)

May 2011
St. Paul, MN

PUBLICATIONS

Conference Publications

Amartya Sanyal, Matt J. Kusner, Adrià Gascón, Varun Kanade

Encrypted Prediction as a Service

International Conference on Machine Learning (ICML), 2018

Niki Kilbertus, Adrià Gascón, Matt J. Kusner, Michael Veale, Krishna Gummadi, Adrian Weller

Blind Justice: Fairness with Encrypted Sensitive Attributes

International Conference on Machine Learning (ICML), 2018

Chirs Russell*, Matt J. Kusner*, Joshua R. Loftus, Ricardo Silva

When Worlds Collide: Integrating Different Counterfactual Assumptions in Fairness

Neural Information Processing Systems (NIPS), 2017

* indicates equal contribution

Matt J. Kusner*, Joshua R. Loftus*, Chirs Russell*, Ricardo Silva

Counterfactual Fairness (oral presentation)

Neural Information Processing Systems (NIPS), 2017

Matt J. Kusner, Brooks Paige, José Miguel Hernández-Lobato

Grammar Variational Autoencoder

International Conference on Machine Learning (ICML), 2017

Gao Huang, Chuan Guo, Matt J. Kusner, Yu Sun, Kilian Q. Weinberger, Fei Sha
Supervised Word Mover's Distance (oral presentation)
Neural Information Processing Systems (NIPS), 2016

Matt J. Kusner, Yu Sun, Karthik Sridharan, Kilian Q. Weinberger
Private Causal Inference (oral presentation)
Artificial Intelligence and Statistics (AISTATS), 2016

Gustavo Malkomes, Matt J. Kusner, Wenlin Chen, Kilian Q. Weinberger, Benjamin Moseley
Fast Distributed k-Center Clustering with Outliers on Massive Data
Neural Information Processing Systems (NIPS), 2015

Matt J. Kusner, Yu Sun, Nicholas I. Kolkin, Kilian Q. Weinberger
From Word Embeddings to Document Distances
International Conference on Machine Learning (ICML), 2015

Matt J. Kusner, Jacob R. Gardner, Roman Garnett, Kilian Q. Weinberger
Differentially Private Bayesian Optimization
International Conference on Machine Learning (ICML), 2015

Matt J. Kusner, Wenlin Chen, Quan Zhou, Zhixiang (Eddie) Xu, Kilian Q. Weinberger, Yixin Chen
Feature-Cost Sensitive Learning with Submodular Trees of Classifiers
AAAI Conference on Artificial Intelligence (AAAI), 2014

Matt J. Kusner, Stephen Tyree, Kilian Q. Weinberger, Kunal Agrawal
Stochastic Neighbor Compression
International Conference on Machine Learning (ICML), 2014

Jacob R. Gardner, Matt J. Kusner, Zhixiang (Eddie) Xu, Kilian Q. Weinberger, John P. Cunningham
Bayesian Optimization with Inequality Constraints
International Conference on Machine Learning (ICML), 2014

Zhixiang (Eddie) Xu, Matt J. Kusner, Gao Huang, Kilian Q. Weinberger
Anytime Feature Learning
International Conference on Machine Learning (ICML), 2013

Zhixiang (Eddie) Xu, Matt J. Kusner, Kilian Q. Weinberger, Minmin Chen
Cost-Sensitive Tree of Classifiers
International Conference on Machine Learning (ICML), 2013

Journal Publications

Mrinal Pahwa, Matt J. Kusner, Carl Hacker, David Bundy, Kilian Q. Weinberger, Eric Leuthardt
Optimizing the Detection of Wakeful and Sleep-Like States for Future Electrocortico-graphic Brain Computer Interface Applications
PLOS ONE Journal, 2015

Zhixiang (Eddie) Xu, Matt J. Kusner, Kilian Q. Weinberger, Minmin Chen, Olivier Chapelle
Classifier Cascades and Trees for Minimizing Feature Evaluation Cost
Journal of Machine Learning Research (JMLR), 2014

Preprints

Joshua R. Loftus, Chris Russell, Matt J. Kusner, Ricardo Silva
Causal Reasoning for Algorithmic Fairness, May 2018

Jacob R. Gardner*, Paul Upchurch*, Matt J. Kusner, Yixuan Li, Kilian Q. Weinberger, Kavita Bala, John E. Hopcroft
Deep Manifold Traversal: Changing Labels with Convolutional Features, March 2016

PROFESSIONAL ACTIVITIES

UAI Conference <i>Publications Chair</i>	August 2018 Monterey, CA
NIPS Press Conference <i>Invited Speaker</i>	December 2017 Long Beach, CA
NIPS Workshop on Machine Learning for Molecules and Materials <i>Co-organizer</i>	December 2017 Long Beach, CA
ICML Conference <i>Workflow Chair</i>	June 2016 New York, NY
ICML Workshop on Resource-Efficient Machine Learning <i>Co-organizer</i>	July 2015 Lille, France
Talk: Dynamic Classification under Test-Time Budgets	
ICML Workshop on Learning with Test-Time Budgets <i>Co-organizer</i>	June 2013 Atlanta, GA
Talk: Anytime Representation Learning	
Program Committee <i>NIPS2018, ICLR2018, NIPS2017, ICML2017, ICML2015, KDD2015, NIPS2015</i>	

TALKS

AI and ML in Cambridge (CamAIML)	March 15, 2018
Cambridge Centre for Mathematical Sciences	February 20, 2018
Oxford Computational Statistics and Machine Learning Seminar	February 16, 2018
The Royal Society	February 12, 2018
Cambridge University Engineering Department	September 12, 2017
Benevolent AI	July 4, 2017
London Machine Learning Meetup	March 27, 2017
Oxford-Man Institute of Quantitative Finance	November 15, 2016

TEACHING

Oxford Warwick Statistics Programme <i>Tutorial on Fairness and Causal Inference</i>	February 2018 Oxford, UK
CS5780 Machine Learning <i>Teaching Assistant (bi-weekly office hours)</i>	Spring 2016 Cornell University
CSE519T Advanced Machine Learning <i>Teaching Assistant (bi-weekly recitations)</i>	Fall 2014 Washington University in St. Louis
CSE517a Machine Learning <i>Teaching Assistant (bi-weekly office hours, exam grading)</i>	Spring 2014 Washington University in St. Louis

GRANT WRITING EXPERIENCE

Differentially Private Learning: From Theory to Applications <i>National Science Foundation Small</i>	September 2016 Award #1618134
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