

BEN LONDON

Sr. Machine Learning Researcher
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RESEARCH INTERESTS

My research focuses on machine learning theory and algorithms, with applications in: structured prediction; graphical models; statistical relational learning; knowledge bases; information retrieval; deep learning; representation learning; recommender systems; and learning from logged bandit feedback.

EMPLOYMENT

Amazon Music ML, *Sr. Machine Learning Scientist*, 2018 – present.
Amazon Core ML, Seattle, *Machine Learning Scientist*, 2015 – 2018.
University of Maryland, LINQS Group, *Graduate Research Assistant*, 2011 – 2015.
Google Research, New York, *Research Intern*, Summer 2014.
Sentrana, Inc., *Analytic Software Engineer*, 2008 – 2010.
Anthrotronix, Inc., *Software Engineer*, 2008 – 2008.
Control Group, Inc., *Software Engineering Intern*, Summer 2007.

EDUCATION

Ph.D. Computer Science, University of Maryland College Park, 2010 – 2015. Advisor: Lise Getoor.
M.S. Computer Science, Columbia University, 2006 – 2008. Advisor: Tony Jebara.
B.M. Music Technology, New York University, 1997 – 2001, *magna cum laude*.

PUBLICATIONS

Journal Articles

O. Meshi, **B. London**, A. Weller, D. Sontag. Train and Test Tightness of LP Relaxations in Structured Prediction. *To appear in JMLR*, 2018
B. London, B. Huang, L. Getoor. Stability and Generalization in Structured Prediction. *JMLR*, 2016
G. Namata, **B. London**, L. Getoor. Collective Graph Identification. *ACM Transactions on Knowledge Discovery from Data*, 2015

Conference Proceedings

B. London. A PAC-Bayesian Analysis of Randomized Learning with Application to Stochastic Gradient Descent. *NeurIPS*, 2017.
J. Pujara, **B. London**, L. Getoor. Budgeted Online Collective Classification. *UAI*, 2015.
B. London, B. Huang, L. Getoor. The Benefits of Learning with Strongly Convex Approximate Inference. *ICML*, 2015. (**Selected for oral presentation**)

- B. London**, B. Huang, B. Taskar, L. Getoor. PAC-Bayesian Collective Stability. *AISTATS*, 2014.
- S. Bach, B. Huang, **B. London**, L. Getoor. Hinge-loss Markov Random Fields: Convex Inference for Structured Prediction. *UAI*, 2013.
- B. London**, B. Huang, B. Taskar, L. Getoor. Collective Stability in Structured Prediction: Generalization from One Example. *ICML*, 2013. **(Selected for oral presentation)**

Workshop Proceedings

- B. London**, T. Sandler. Bayesian Counterfactual Risk Minimization. *ICML Workshop on CausalML*, 2018.
- B. London**. Generalization Bounds for Randomized Learning with Application to Stochastic Gradient Descent. *NeurIPS Workshop on Optimizing the Optimizers*, 2016.
- B. London**, O. Meshi, A. Weller. Bounding the Integrality Distance of LP Relaxations for Structured Prediction. *NeurIPS Workshop on Optimization for Machine Learning*, 2016.
- B. London**, A. Schwing. Generative Adversarial Structured Networks. *NeurIPS Workshop on Adversarial Training*, 2016.
- B. London**, B. Huang, L. Getoor. On the Strong Convexity of Variational Inference. *NeurIPS Workshop on Advances in Variational Inference*, 2014.
- B. London**, B. Huang, B. Taskar, L. Getoor. PAC-Bayesian Generalization Bounds for Randomized Structured Prediction. *NeurIPS Workshop on Perturbations, Optimization and Statistics*, 2013. **(Selected for oral presentation)**
- B. London**, S. Khamis, S. Bach, B. Huang, L. Getoor, L. Davis. Collective Activity Detection using Hinge-loss Markov Random Fields. *CVPR Workshop on Structure Prediction: Tractability, Learning and Inference*, 2013. **(Selected for oral presentation)**
- B. Huang, **B. London**, B. Taskar, L. Getoor. Empirical Analysis of Collective Stability. *ICML Workshop on Structured Learning (SLG)*, 2013.
- B. London**, B. Huang, L. Getoor. Improved Generalization Bounds for Large-scale Structured Prediction. *NeurIPS Workshop on Algorithmic and Statistical Approaches for Large Social Networks*, 2012.
- B. London**, T. Rekatsinas, B. Huang, L. Getoor. Multi-relational Weighted Tensor Decomposition. *NeurIPS Workshop on Spectral Learning*, 2012.
- G. Namata, **B. London**, L. Getoor, B. Huang. Query-driven Active Surveying for Collective Classification. *ICML Workshop on Mining and Learning with Graphs*, 2012. **(Selected for oral presentation)**
- J. Pujara, **B. London**, L. Getoor. Reducing Label Cost by Combining Feature Labels and Crowdsourcing. *ICML Workshop on Combining Label Strategies to Reduce Label Cost*, 2011.

Book Chapters

- B. London**, L. Getoor. Collective Classification of Network Data. *Data Classification: Algorithms and Applications*, Charu Aggarwal. CRC Press, 2013.

Technical Reports

- B. London**, T. Rekatsinas, B. Huang, L. Getoor. Multi-relational Learning Using Weighted Tensor Decomposition with Modular Loss. <http://arxiv.org/abs/1303.1733>, 2013.
- B. London**, B. Huang, L. Getoor. Graph-based Generalization Bounds for Learning Binary Relations. <http://arxiv.org/abs/1302.5348>, 2013.

TEACHING

Introduction to Machine Learning at Amazon, *Instructor*, 2017.

Artificial Intelligence, *Teaching Assistant*, Spring 2013. Instructor: Lise Getoor.

Machine Learning, *Teaching Assistant*, Fall 2010. Instructor: Lise Getoor.

PROFESSIONAL SERVICE

Reviewed for: Algorithmic Learning Theory (ALT); Conference on Learning Theory (COLT); International Conference on Machine Learning (ICML); International Joint Conference on Artificial Intelligence (IJCAI); Journal of Machine Learning Research (JMLR); Neural Information Processing Systems (NeurIPS); Transactions of Knowledge Discovery from Data (TKDD); Uncertainty in Artificial Intelligence (UAI)

Review panel member for the National Science Foundation (NSF)

AWARDS AND HONORS

NeurIPS Best Reviewer, 2015

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