He He

Contact Information

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Research Interests

Education

University of Maryland, College Park, U.S.A.
Ph.D. in Computer Science (Advisors: Hal Daumé III, Jordan Boyd-Graber) 2011–2016
M.Sc. in Computer Science 2011–2013

The Hong Kong Polytechnic University, China
B.Eng. (Hons) in Electronic and Information Engineering (Advisor: Wan-Chi Siu) 2007–2011

University of Waterloo, Canada
Non-degree exchange, Department of Electrical and Computer Engineering Fall 2009

Employment

Stanford University, Stanford, CA
Post-doc researcher (Supervisor: Percy Liang) 2016–

Microsoft Cloud Information and Service Lab, Redmond, WA
Research Intern (Mentors: Paul Mineiro, Nikos Karampatziakis) Summer 2015
Active information acquisition for sentiment analysis and object recognition

Machine Learning Group, Microsoft Research, Redmond, WA
Research Intern (Mentors: Lihong Li, Jason Williams) Summer 2013
Combining imitation learning and reinforcement learning for dialog management

Awards and Honors

Board of Visitors Graduate Student Award (awarded to 2 students in the CMNS college) 2016
Larry S. Davis Dissertation Award 2016
Best Demonstration Award, NIPS 2015
Tammy L. Blair Award 2nd runner-up, Fusion 2015
Dean's Fellowship, UMD 2011–2012
Best Academic Performance Award (awarded to the top 3 students), HKPolyU 2008–2010
Dean's Honors List, HKPolyU 2008–2010
HSBC Scholarship for Mainland Students 2008–2010
CMA & Donors Scholarship 2008–2010
Non-local Students Scholarship (academic), HKPolyU 2007–2010

Publications

Conference

He He, Anusha Balakrishnan, Mihail Eric and Percy Liang.
Learning Symmetric Collaborative Dialogue Agents with Dynamic Knowledge Graph Embeddings.
Association for Computational Linguistics (ACL), 2017

Kai-Wei Chang, **He He**, Hal Daumé III, John Langford and Stéphane Ross.
A Credit Assignment Compiler for Joint Prediction.
Neural Information Processing Systems (NIPS), 2016.

He He, Jordan Boyd-Graber, Kevin Kwok and Hal Daumé III.
Opponent Modeling in Deep Reinforcement Learning.
International Conference on Machine Learning (ICML), 2016.

He He, Jordan Boyd-Graber and Hal Daumé III.
Interpretese vs. Translationese: The Uniqueness of Human Strategies in Simultaneous

Interpretation.
North American Association for Computational Linguistics (NAACL), 2016.

Xi Chen, **He He**, Larry Davis.
Object Detection in 20 Questions.
IEEE Winter Conference on Applications of Computer Vision (WACV), 2016.

He He, Alvin Grissom II, Jordan Boyd-Graber and Hal Daumé III.
Syntax-based Rewriting for Simultaneous Machine Translation.
Empirical Methods in Natural Language Processing (EMNLP), 2015.

Jordan Boyd-Graber, Mohit Iyyer, **He He**, and Hal Daumé III.
Interactive Incremental Question Answering. (Demo track)
Neural Information Processing Systems (NIPS), 2015. Best demonstration award.

Xiangyang Liu, **He He** and John Baras.
Crowdsourcing with Multi-Dimensional Trust.
International Conference on Information Fusion (Fusion), 2015. 2nd runner-up for the Tammy L. Blair Award.

Xiangyang Liu, **He He** and John Baras.
Trust-Aware Optimal Crowdsourcing With Budget Constraint.
IEEE International Conference on Communications (ICC), 2015.

He He, Hal Daumé III and Jason Eisner.
Learning to Search in Branch and Bound Algorithms.
Neural Information Processing Systems (NIPS), 2014.

Alvin Grissom II, **He He**, Jordan Boyd-Graber, John Morgan, and Hal Daumé III.
Don't Until the Final Verb Wait: Reinforcement Learning for Simultaneous Machine Translation.
Empirical Methods in Natural Language Processing (EMNLP), 2014.

Lihong Li, **He He** and Jason D. Williams.
Temporal Supervised Learning for Inferring a Dialog Policy from Example Conversations.
IEEE Workshop on Spoken Language Technology (SLT), 2014.

He He, Hal Daumé III and Jason Eisner.
Dynamic Feature Selection for Dependency Parsing.
Empirical Methods in Natural Language Processing (EMNLP), 2013.

He He, Hal Daumé III and Jason Eisner.
Imitation Learning by Coaching.
Neural Information Processing Systems (NIPS), 2012.

Jordan Boyd-Graber, Brianna Satinoff, **He He** and Hal Daumé III.
Besting the Quiz Master: Crowdsourcing Incremental Classification Games.
Empirical Methods in Natural Language Processing (EMNLP), 2012.

He He and Wan Chi Siu.
Image Super-resolution using Gaussian Process Regression.
Computer Vision and Pattern Recognition Conference (CVPR), 2011.

He He and Ali Ghodsi.
Rare Class Classification by Support Vector Machines.
International Conference on Pattern Recognition (ICPR), 2010.

Workshop

He He, Paul Mineiro and Nikos Karampatziakis.
Active Information Acquisition.
Machine Learning From and For Adaptive User Technologies: From Active Learning & Experimentation to Optimization & Personalization, NIPS, 2015.

He He, Hal Daumé III and Jason Eisner.
Cost-sensitive Dynamic Feature Selection. Workshop on Inferning, ICML, 2012.

Teaching Experience

Department of Computer Science, University of Maryland, College Park
Teaching Assistant, Object-oriented Programming (CMSC 132) Fall 2011

Invited Talks

Learning agents that interact with humans 2017
USC ISI, Allen Institute for AI, Salesforce, SJTU

Understanding natural language: chat bots and beyond 2017
WECode (women in computer science conference)

Decision-making in incremental question answering 2016
Stanford Data Science Initiative Retreat

Sequential decision-making for natural language processing 2015
UPenn, UC Boulder, Microsoft Research

Professional Service

Reviewer, ACL, NAACL, EMNLP, NIPS, ICML, AAAI, AISTATS
Co-chair, First Workshop for Women and Underrepresented Minorities in NLP 2017
Co-chair, ACL Student Research Workshop 2016
Organizing Committee, NAACL Workshop on Human-computer Question Answering 2016
Organizing Committee, NAACL Tutorial on Learning to Search for Structured Prediction 2015
Organizing Committee, Mid-Atlantic Student Colloquium on Speech, Language and Learning 2015
Contributor, Challenge Problem on NLP for DARPA Program Probabilistic Programming for Advancing Machine Learning 2015