He He

Personal

Address: Gates 254, Stanford University, Stanford, CA 94305
Email: hehe@cs.stanford.edu
Homepage: hhexiy.github.io

Research Interests

Natural language processing and interactive learning, with a focus on dialogue, machine simultaneous translation, imitation learning, and reinforcement learning

Education

2011–2016 **University of Maryland, College Park**
Ph.D. in Computer Science
Advisors: Hal Daumé III, Jordan Boyd-Graber
M.Sc. in Computer Science received in 2013

2007–2011 **The Hong Kong Polytechnic University**
B.Eng. in Electronic and Information Engineering

Work Experience

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

Summer 2015 **Microsoft Cloud Information and Service Lab**, Redmond, WA
Research Intern Mentors: Paul Mineiro, Nikos Karampatziakis

Summer 2013 **Microsoft Research**, Redmond, WA
Research Intern Mentors: Lihong Li, Jason Williams

Awards and Honors

2016 Larry S. Davis Dissertation Award
2016 Board of Visitors Graduate Student Award, UMD
2015 Best Demonstration Award, NIPS
2011–2012 Dean's Fellowship, UMD
2008–2010 HSBC Scholarship
2008–2010 CMA & Donors Scholarship

Publications

Refereed conference papers

Urvashi Khandelwal, **He He**, Peng Qi and Dan Jurafsky.
Sharp Nearby, Fuzzy Far Away: How Neural Language Models Use Context.
Association for Computational Linguistics (ACL), 2018

Juncen Li, Robin Jia, **He He** and Percy Liang.
Delete, Retrieve, Generate: a Simple Approach to Sentiment and Style Transfer.
North American Association for Computational Linguistics (NAACL), 2018.

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

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

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 and Hal Daumé III.
Interpretese vs. Translationese: The Uniqueness of Human Strategies in Simultaneous Interpretation. (Short paper)
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. (Demonstration 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. Tammy L. Blair Award 2nd runner-up.

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 papers and manuscripts

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.

Kai-Wei Chang, **He He**, Hal Daumé III and John Langford.
Learning to Search for Dependencies.
Arxiv 1503.05615, 2015.

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

Teaching Experience

Fall 2011 University of Maryland, College Park
Teaching Assistant, Object-oriented Programming

Invited Talks

2017 Learning Agents that Interact with Humans
USC ISI, UC Berkeley, Allen Institute for AI, Salesforce, SJTU, Amazon

2017 Understanding Natural Language: Chatbots and Beyond
WECode (women in computer science conference)

2016 Decision-making in Incremental Question Answering
Stanford Data Science Initiative Retreat

2015 Sequential Decision-making for Natural Language Processing
UPenn, UC Boulder, Microsoft Research

Service

Reviewer: ACL, NAACL, EMNLP, NIPS, ICML, AAAI, AISTATS
Co-chair, First Workshop for Women and Underrepresented Minorities in NLP, ACL 2017
Co-chair, Student Research Workshop, ACL 2016
Organizing Committee, Workshop on Human-computer Question Answering, NAACL 2016
Organizing Committee, Tutorial on Learning to Search for Structured Prediction, NAACL 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