David Hall

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Education

Ph.D., Computer Science, University of California, Berkeley, 2014 expected.

   Advisor: Dan Klein

M.S., Symbolic Systems, Stanford University, 2009.

   Advisors: Dan Jurafsky and Chris Manning

B.S. with Honors, Symbolic Systems, Stanford University, 2008.

Research Interests

Natural Language Processing, Machine Learning, Artificial Intelligence, Historical Linguistics, Phylogenetics.

Honors & Awards

Distinguished Paper for Training Factored PCFGs with Expectation Propagation at EMNLP, 2012.

Google PhD Fellowship, 2012.

Outstanding Graduate Student Instructor Award (Department), 2011.

Outstanding Graduate Student Instructor Award (Campus), 2011.

Winner, AIIDE StarCraft AI competition, 2010.

NSF Graduate Research Fellowship, 2010.

Firestone Medal for Undergraduate Thesis, 2008.

Phi Beta Kappa (Junior Year Inductee), 2007.

Publications

David Hall, Greg Durrett, and Dan Klein. 2014. Less Grammar, More Features. In Proceedings of Association for Computational Linguistics.

David Hall, Taylor Berg-Kirkpatrick, John Canny, and Dan Klein. 2014. Sparser, Better, Faster GPU Parsing. In Proceedings of Association for Computational Linguistics.

John Canny, David Hall, and Dan Klein. 2013. A multi-Teraflop Constiuency Parser using GPUs. In Proceedings of Empirical Methods in Natural Language Processing.

Greg Durrett, David Hall, and Dan Klein. 2013. Entity-Level Coreference Resolution via Belief Propagation. In Proceedings of the Association for Computational Linguistics.

Will Chang, David Hall, Chundra Cathcart, and Andrew Garrett. 2013. Dating Proto-Indo-European: A revised computational analysis supports the steppe hypothesis. In Proceedings of the International Conference on Historical Linguistics.

David Hall, Alon Cohen, David Burkett, and Dan Klein. 2013. Faster Optimal Planning with Partial Order Pruning. In Proceedings of the International Conference on Automated Planning and Scheduling.

Alexandre Bouchard-Cote, David Hall, Tom Griffiths, and Dan Klein. 2013. Automated reconstruction of ancient languages using probabilistic models of sound change. In Proceedings of the National Academy of Sciences.

David Hall, and Dan Klein. 2012. Training Factored PCFGs with Expectation Propagation. In Proceedings of Empirical Methods in Natural Language Processing.

Jonathan K. Kummerfeld, David Hall, James R. Curran, and Dan Klein. 2012. Parser Showdown at the Wall Street Corral: An Empirical Investigation of Error Types in Parser Output. In Proceedings of Empirical Methods in Natural Language Processing.

David Hall, and Dan Klein. 2011. Large-Scale Cognate Recovery. In Proceedings of Empirical Methods in Natural Language Processing.

David Burkett, David Hall, and Dan Klein. 2011. Iterative Monotonically Bounded A*. In Proceedings of Associiation for the Advancement of Artificial Intelligence.

David Hall and Dan Klein. 2010. Finding Cognate Groups using Phylogenies. In Proceedings of the Association for Computational Linguistics.

Daniel Ramage, David Hall, Ramesh Nallapati, and Christopher D. Manning. 2009. Labeled LDA: A supervised topic model for credit attribution in multi-labeled corpora. In Proceedings of Empirical Methods in Natural Language Processing.

David L.W. Hall, Daniel Jurafsky, and Christopher D. Manning. 2008. Studying the History of Ideas Using Topic Models. In Proceedings of Empirical Methods in Natural Language Processing.

Nathanael Chambers, Daniel Cer, Trond Grenager, David Hall, Chloe Kiddon, Bill MacCartney, Marie-Catherine de Marneffe, Daniel Ramage, Eric Yeh, Christopher D. Manning. 2007. Learning Alignments and Publications Leveraging Natural Logic. Third Pascal Recognizing Textual Entailment Challenge Workshop.

Other Reports

David L. W. Hall. 2008. Tracking the Evolution of Science. Honors Thesis.

Employment

University of California, Berkeley

Research Assistant, Dan Klein, 2009 to present.

Stanford University

Research Assistant, Daniel Jurafsky and Christopher Manning, 2008 to 2009.

Google, Inc.

Research Intern, Thorsten Brants, Summers 2006-2007.

University of Alabama at Birmingham

Research Assistant/Programmer, Andrew Pollard, Summers 2003-2005.

Teaching Experience

Graduate Student Instructor. Large-Scale Decision Making in Complex Environments. Dan Klein. Spring 2011.

Graduate Student Instructor. Introduction to Artificial Intelligence. Dan Klein. Fall 2010.

Teaching Assistant. From Language to Information. Daniel Jurafsky. Winter 2009.

Section Leader. Programming Paradigms. Jerry Cain. Autumn, Spring, 2006-2008.

Section Leader. Programming Abstractions (Accelerated). Jerry Cain. Winter 2008.

Teaching Assistant. Linguistics Summer Institute. Steven Bird. Summer 2007.

Student Teacher. Multi-Paradigmatic Programming In OCaml. (Student Initiated). Spring 2007.

Student Teacher. Modern C++ Techniques. (Student Initiated). Spring 2006.

Professional Service

Program Manager, NIPS 2011.

Reviewer: AAAI, ACL, ACL-IJCNLP Student Research Workshop, ACM TSLP, COLING, CoNLL, EACL, EMNLP, IJCAI, NAACL, NAACL Student Research Workshop, NIPS.

Ph.D. Admissions Committee, UC Berkeley

Other Service

Volunteer Mentor, Berkeley Animal Care Services, 2010 to Present.

Volunteer, Bay Area Dog Owners Responsible About Pit Bulls (BAD RAP), 2012 to Present.

Scientific Software

ScalaNLP Breeze

Linear algebra and "Matlab replacement" for Scala

Code to make research in NLP and Machine Learning easier

Epic

Framework for structured prediction in NLP

A high-performance syntactic parser

Last updated: April 16, 2014