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ALEXANDER M. RUSH

Appointment

Harvard University School of Engineering and Applied Sciences
2015-. Assistant Professor of Computer Science

Facebook Artificial Intelligence Research Lab
2015. Post-Doctoral Fellowship
Advisor: Yann LeCunn

Education

Massachusetts Institute of Technology
2009-2014. Ph.D, Computer Science.
Advisor: Michael Collins
Dissertation: *Relaxation Methods for Natural Language Decoding.*

Columbia University
2011-2014. Visiting Scholar, Department of Computer Science.

Harvard University
2007. B.A., Computer Science. (Magna Cum Laude With Highest Honors.)

Grants and Awards

2012 Best Paper Award, North American Association of Computational Linguistics.

2010 Best Paper Award, Empirical Methods in Natural Language Processing.

2009 Graduate Research Fellow, National Science Foundation.

2006 Outstanding Undergraduate Award Finalist, Computing Research Association.

Recent Publications

Guilluime Klein, Yoon Kim, Yuntian Deng, Jean Senallart, and Alexander M. Rush. *OpenNMT. ACL 2017*

Yoon Kim, Carl Denton, Luong Hoang, and Alexander M. Rush. *Structured Attention Networks. ICLR 2017*

Greg Yang and Alexander M. Rush. *Lie-Access Neural Turing Machines. ICLR 2017*

Alexander Rush. *Interpreting, Training, and Distilling Seq2Seq Models. Recent Overview Talk*

Yuntian Deng, Anssi Kanervisto, and Alexander M. Rush. *What You Get Is What You See: A Visual Markup Decompiler. Arxiv Pre-print*

Hendrik Strobelt, Sebastian Gehrmann, Bernd Huber, Hanspeter Pfister, and Alexander M. Rush. *Visual Analysis of Hidden State Dynamics in Recurrent Neural Networks. Arxiv Pre-print*

Yoon Kim and Alexander M. Rush. *Sequence-Level Knowledge Distillation. Proceedings of EMNLP 2016*

Sam Wiseman and Alexander M. Rush. *Sequence-to-Sequence Learning as Beam-Search Opimization. Proceedings of EMNLP 2016*

Peter Kraft, Hirsh Jain, and Alexander M. Rush. *An Embedding Model for Predicting Roll-Call Votes. Proceedings of EMNLP 2016*

Allen Schmaltz, Alexander M. Rush, and Stuart M. Shieber. *Word Ordering Without Syntax. Proceedings of EMNLP 2016*

Alexander M. Rush and Slav Petrov, *Vine Pruning for Efficient Multi-Pass Dependency Parsing*. Proceedings of NAACL 2012. [Best Paper Award]

Terry Koo, Alexander M. Rush, Michael Collins, Tommi Jaakkola, and David Sontag. *Dual Decomposition for Parsing with Non-Projective Head Automata*. Proceedings of EMNLP 2010. [Best Paper Award]

Patents

Techniques for discriminative dependency parsing (Google). Slav Petrov, Alexander M. Rush, 2015.

Efficient parsing with structured prediction cascades (Google). Slav Petrov, Alexander M. Rush, 2013

Determining user affinity towards applications on a social networking website (Facebook., Thomas S. Whitnah, Alexander M. Rush, Ding Zhou, Ruchi Sangvhi, 2010.

Industry

Lead Engineer (Platform Team), *Facebook*, June 2007 – August 2009, Palo Alto, CA.

Open-Source

OpenNMT - Open-source neural machine translation system.

LSTMVis - Visual analysis of recurrent neural network dynamics.

Sequence-to-Sequence with Attention - General-purpose sequence-to-sequence model .

CNN for Text Clasification - Convolutional sentence classification.