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JANG SUN LEE

(aka. Karl Stratos)

- Employment** Research Scientist, *Bloomberg L.P., New York, NY (2016–current)*
- Education** *Columbia University, New York, NY (2011–2016)*
Ph.D. in Computer Science (Advisor: [Michael Collins](#))
Thesis: [Spectral Methods for Natural Language Processing](#)
University of Rochester, Rochester, NY (2008–2011)
Bachelor of Science in Computer Science
Bachelor of Arts in Mathematics
Minor in History
- Research Areas** Machine learning, natural language processing (code at [GitHub](#))
- Grades/Honors** GPA: 3.85/4.0, Magna Cum Laude
GRE: V. 710/800 (98%), Q. 790/800 (91%), A. 5/6 (84%)
The Phi Beta Kappa Society Member
Golden Key International Honour Society Member
The National Society of Collegiate Scholars Member
Rush Rhees Scholarship Recipient (University of Rochester)
Donald M. Barnard Award Recipient (University of Rochester)
- Publications** Karl Stratos, Michael Collins, and Daniel Hsu. [Unsupervised Part-Of-Speech Tagging with Anchor Hidden Markov Models](#). In TACL 2016
Young-Bum Kim, Karl Stratos, and Ruhi Sarikaya. [Scalable Semi-Supervised Query Classification Using Matrix Sketching](#). In Proceedings of ACL 2016 (Short)
Karl Stratos, Michael Collins, and Daniel Hsu. [Model-based Word Embeddings from Decompositions of Count Matrices](#). In Proceedings of ACL 2015
Young-Bum Kim, Karl Stratos, Ruhi Sarikaya, and Minwoo Jeong. [New Transfer Learning Techniques for Disparate Label Sets](#). In Proceedings of ACL 2015
Young-Bum Kim, Karl Stratos, and Ruhi Sarikaya. [Pre-training of Hidden-Unit CRFs](#). In Proceedings of ACL 2015 (Short)
Young-Bum Kim, Karl Stratos, Xiaohu Liu, and Ruhi Sarikaya. [Compact Lexicon Selection with Spectral Methods](#). In Proceedings of ACL 2015 (Short)

- Karl Stratos and Michael Collins. [Simple Semi-Supervised POS Tagging](#). In Proceedings of NAACL 2015 Workshop on Vector Space Modeling for NLP
- Young-Bum Kim, Minwoo Jeong, Karl Stratos, and Ruhi Sarikaya. [Weakly Supervised Slot Tagging with Partially Labeled Sequences from Web Search Click Logs](#). In Proceedings of NAACL 2015
- YoungHoon Jung, Karl Stratos, and Luca P. Carloni. [LN-Annotate: An Alternative Approach to Information Extraction from Emails using Locally-Customized Named-Entity Recognition](#). In Proceedings of WWW 2015
- Karl Stratos, Do-kyum Kim, Michael Collins, and Daniel Hsu. [A Spectral Algorithm for Learning Class-Based n-gram Models of Natural Language](#). In Proceedings of UAI 2014
- Shay B. Cohen, Karl Stratos, Michael Collins, Dean Foster and Lyle Ungar. [Spectral Learning of Latent-Variable PCFGs: Algorithms and Sample Complexity](#). In JMLR 2014
- Karl Stratos, Alexander M. Rush, Shay B. Cohen, and Michael Collins. [Spectral Learning of Refinement HMMs](#). In Proceedings of CoNLL 2013
- Shay B. Cohen, Karl Stratos, Michael Collins, Dean Foster and Lyle Ungar. [Experiments with Spectral Learning of Latent-Variable PCFGs](#). In Proceedings of NAACL 2013
- Shay B. Cohen, Karl Stratos, Michael Collins, Dean Foster and Lyle Ungar. [Spectral Learning of Latent-Variable PCFGs](#). In Proceedings of ACL 2012
- Margaret Mitchell, Xufeng Han, Jesse Dodge, Alyssa Mensch, Amit Goyal, Alex Berg, Kota Yamaguchi, Tamara Berg, Karl Stratos, and Hal Daumé III. [Midge: Generating image descriptions from computer vision detections](#). In Proceedings of EACL 2012
- Alexander C. Berg, Tamara L. Berg, Hal Daumé III, Jesse Dodge, Amit Goyal, Xufeng Han, Alyssa Mensch, Margaret Mitchell, Aneesh Sood, Karl Stratos, and Kota Yamaguchi. [Understanding and Predicting Importance in Images](#). In Proceedings of CVPR 2012
- Karl Stratos, Lenhart K. Schubert, and Jonathan Gordon. [Episodic Logic: Natural Logic + Reasoning](#). In Proceedings of KEOD 2011
- Lenhart Schubert, Jonathan Gordon, Karl Stratos, and Adina Rubinoff. [Towards Adequate Knowledge and Natural Inference](#). In Proceedings of AAI Fall Symposium on Advances in Cognitive Systems 2011

Academic
Internships

- 2014 Research Intern, *Google Inc.*, June–August. Worked with Slav Petrov and Emily Pitler.
- 2013 Research Intern, *Microsoft*, June–August. Worked with Sham Kakade and T. J. Hazen.
- 2011 Summer Workshop, *Johns Hopkins University Center for Language and Speech Processing*, July–August. Worked with Alexander and Tamara Berg.

2010 Research Intern, *University of Rochester*, June–August. Worked with Lenhart Schubert.

Teaching

2013 Teaching Assistant, Advanced Machine Learning, Daniel Hsu, Columbia University, Fall

2012 Teaching Assistant, Machine Learning for Natural Language Processing, Michael Collins, Columbia University, Spring

2011 Teaching Assistant, Introduction to Artificial Intelligence, George Ferguson, University of Rochester, Spring

2010 Teaching Assistant, Computation and Formal Systems (designed a new Prolog project), Christopher Brown, University of Rochester, Fall

2010 Workshop Leader, Introduction to Computer Science, University of Rochester, Spring

Professional
Activities

Reviewer for: ACL, NAACL, EMNLP, ICML, NIPS, CoNLL, COLING

Program Committee, *ACL Workshop on Representation Learning for NLP*, 2016

Program Committee, *ACL Workshop on Evaluating Vector Space Representations for NLP*, 2016

Program Committee, *NAACL Workshop on Vector Space Modeling for NLP*, 2015

NAACL 2013 Tutorial, *Spectral Learning Algorithms for Natural Language Processing* with Shay Cohen, Michael Collins, Dean Foster, and Lyle Ungar

Program Committee, *Mid-Atlantic Student Colloquium on Speech, Language and Learning*, 2012

Misc

Political Intern, *Korean National Assembly*, Summer 2009