Jonathan K. Kummerfeld

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Current   University of Michigan   September 2016 – Present
Postdoctoral Research Fellow in Computer Science Engineering.
CROMA Lab (2018–Present), Sapphire Project (2016–2018)

Education   PhD in Computer Science   2010–2016
"Algorithms for Identifying Syntactic Errors and Parsing with Graph Structured Output"
University of California, Berkeley
Adviser: Dan Klein

Bachelor of Science (Advanced) (Honours) Class I with University Medal   2006–2009
"Adaptive Supertagging for Faster Parsing"
University of Sydney
Adviser: James Curran

Publications   An Evaluation for Intent Classification and Out-of-Scope Prediction
S. Larson, A. Mahendran, J. J. Peper, C. Clarke, A. Lee, P. Hill, **J. K. Kummerfeld**,
K. Leach, M. A. Laurenzano, L. Tang and J. Mars
Empirical Methods in Natural Language Processing, 2019

A Large-Scale Corpus for Conversation Disentanglement
J. K. Kummerfeld, S. R. Gouravajhala, J. Peper, V. Athreya, C. Gunasekara, J. Ganhotra, S. S. Patel, L. Polymenakos, W. S. Lasecki
Association for Computational Linguistics, 2019

SLATE: A Super-Lightweight Annotation Tool for Experts
J. K. Kummerfeld
Association for Computational Linguistics: Demonstrations, 2019

Outlier Detection for Improved Data Quality and Diversity in Dialog Systems
S. Larson, A. Mahendran, A. Lee, **J. K. Kummerfeld**, P. Hill, M. Laurenzano, J. Hauswald,
L. Tang, J. Mars
North American Chapter of the Association for Computational Linguistics, 2019

Look Who's Talking: Inferring Speaker Attributes from Personal Longitudinal Dialog
C. Welch, V. Perez-Rosas, **J. K. Kummerfeld**, R. Mihalcea
Computational Linguistics and Intelligent Text Processing, 2019
Best Student Paper Award

DSTC7 Task 1: Noetic End-to-End Response Selection
C. Gunasekara, **J. K. Kummerfeld**, L. Polymenakos, W. S. Lasecki
Dialog System Technology Challenges, 2019

Improving Text-to-SQL Evaluation Methodology
C. Finegan-Dollak*, **J. K. Kummerfeld***, L. Zhang, K. R. D. Ramanathan, S. Sadasivam, R. Zhang, D. Radev
Association for Computational Linguistics, 2018

Factors Influencing the Surprising Instability of Word Embeddings
L. Wendlandt, **J. K. Kummerfeld**, R. Mihalcea
North American Chapter of the Association for Computational Linguistics, 2018

Effective Crowdsourcing for a New Type of Summarization Task
Y. Jiang, C. Finegan-Dollak, **J. K. Kummerfeld**, W. Lasecki
North American Chapter of the Association for Computational Linguistics, 2018

Data Collection for Dialogue System: A Startup Perspective
Y. Kang, Y. Zhang, **J. K. Kummerfeld**, P. Hill, J. Hauswald, M. A. Laurenzano, L. Tang,
J. Mars
North American Chapter of the Association for Computational Linguistics, 2018

Dialog System Technology Challenge 7
K. Yoshino, C. Hori, J. Perez, L. F. D'Haro, L. Polymenakos, C. Gunasekara, W. S. Lasecki,
J. K. Kummerfeld, M. Galley, C. Brockett, J. Gao, B. Dolan, X. Gao, H. Alamari,
T. K. Marks, D. Parikh, D. Batra
NeurIPS Workshop on Conversational AI, 2018

World Knowledge for Semantic Parsing with Abstract Meaning Representation
C. Welch, **J. K. Kummerfeld**, S. Feng, R. Mihalcea
Language Resources and Evaluation Conference, 2018

Parsing with Traces: An $O(n^4)$ Algorithm and a Structural Representation
J. K. Kummerfeld, D. Klein
Transactions of the Association for Computational Linguistics, 2017

Identifying Products in Online Cybercrime Marketplaces: A Dataset for Fine-grained Domain Adaptation
G. Durrett, **J. K. Kummerfeld**, T. Berg-Kirkpatrick, R. S. Portnoff, S. Afroz, D. McCoy,
K. Levchenko, V. Paxson
Empirical Methods in Natural Language Processing, 2017

Understanding Task Design Trade-offs in Crowdsourced Paraphrase Collection
Y. Jiang, **J. K. Kummerfeld**, W. S. Laseck
Association for Computational Linguistics, 2017

Tools for Automated Analysis of Cybercriminal Markets
R. S. Portnoff, S. Afroz, G. Durrett, **J. K. Kummerfeld**, T. Berg-Kirkpatrick, D. McCoy,
K. Levchenko, V. Paxson
International World Wide Web Conferenc, 2017

An Empirical Analysis of Optimization for Max-Margin NLP
J. K. Kummerfeld, T. Berg-Kirkpatrick, D. Klein
Empirical Methods in Natural Language Processing, 2015

Error-Driven Analysis of Challenges in Coreference Resolution
J. K. Kummerfeld, D. Klein
Empirical Methods in Natural Language Processing, 2013

An Empirical Examination of Challenges in Chinese Parsing
J. K. Kummerfeld, D. Tse, J. R. Curran, D. Klein
Association for Computational Linguistics, 2013

High-velocity Clouds in the Galactic All Sky Survey. I. Catalog
V. A. Moss, N. M. McClure-Griffiths, T. Murphy, D. J. Pisano, **J. K. Kummerfeld**,
J. R. Curran
The Astrophysical Journal Supplement Series, 2013, 209:12

Parser Showdown at the Wall Street Corral: An Empirical Investigation of Error Types
in Parser Output
J. K. Kummerfeld, D. Hall, J. R. Curran, D. Klein
Empirical Methods in Natural Language Processing, 2012

Robust Conversion of CCG Derivations to Phrase Structure Trees
J. K. Kummerfeld, D. Klein, J. R. Curran

Association for Computational Linguistics, 2012

Mention Detection: Heuristics for the OntoNotes annotations
J. K. Kummerfeld, M. Bansal, D. Burkett, D. Klein
Conference on Natural Language Learning, 2011

Faster Parsing by Supertagger Adaptation
J. K. Kummerfeld, J. Roesner, T. Dawborn, J. Haggerty, J. Curran, S. Clarke
Association for Computational Linguistics, 2010

Morphological Analysis Can Improve a CCG Parser for English
M. Honnibal, **J. K. Kummerfeld**, J. R. Curran
International Conference on Computational Linguistics, 2010

Spatiotemporal Hierarchy of Relaxation Events, Dynamical Heterogeneities, and Structural Reorganization in a Supercooled Liquid
R. Candelier, A. Widmer-Cooper, **J. K. Kummerfeld**, O. Dauchot, G. Biroli, P. Harrowell, D. R Reichman
Physical Review Letters, 2010, 105:135702

Faster Parsing and Supertagging Model Estimation
J. K. Kummerfeld, J. Roesner, J. R. Curran
Australasian Language Technology Association, 2009

Classification of Verb Particle Constructions with the Google Web1T Corpus
J. K. Kummerfeld, J. R. Curran
Australasian Language Technology Association, 2008

The Densest Packing of AB Binary Hard-Sphere Homogeneous Compounds across all Size Ratios
J. K. Kummerfeld, T. S. Hudson, P. Harrowell
The Journal of Physical Chemistry B, 2008, 112:10773–10776

Grants, Awards, and Honors	**Bloomberg Data Science Research Grant** Co-PI on grant to develop adaptive annotation methods	2019
	Outstanding Postdoctoral Fellow Award For excellence in research, mentorship, teaching, leadership, and service	2018
	Michigan Institute for Data Science Music Initiative Co-PI on grant to develop models that map text to music (75k)	2018
	Allen Institute for AI Key Scientific Challenges Program Unrestricted funding to support research (10k)	2017
	Chair's Special Award For services to the EECS department during student admissions and recruitment	2013
	Outstanding Graduate Student Instructor Award University wide award in recognition of exceptional achievements as a teacher	2011
	General Sir John Monash Award "Australia's most prestigious postgraduate scholarships"	2009
	University Medal in Computer Science For outstanding results, awarded at the discretion of the university senate	2009

Employment	**Postdoctoral Research Fellow**	
	University of Michigan	September 2016 – Present
	Consultant / Technical Adviser	
	Clinc	January 2017 – Present
	Naming Matters	May 2015 – Present
	WriteLab (acquired by Chegg)	March 2014 – May 2018
	Techbridge	September 2013 - May 2014
	Software Engineer – Intern	
	Google Research – Mountain View, NLP team	May - August 2012
	Google – Sydney, Infrastructure team	December 2007 - February 2008
	Research Assistant	
	U. Sydney, School of Information Technologies, Prof. Kay	2010
	U. Sydney, School of Physics, Dr. Murphy	2010
	U. Sydney, School of Chemistry, Prof. Harrowell	2009
	U. Sydney, School of Letters, Art and Media, Dr. Bode	2008, 2009

Teaching, Mentoring, Invited Talks	**Instructor**	
	Artificial Intelligence, Berkeley	Summer 2014
	Co-taught upper division course – gave lectures, managed TAs, and prepared exams.	
	Evaluation: 6.3 / 7 (top 11% of UCB EECS instructors with public results).	
	Talks	
	University of California, Berkeley, NLP Seminar	February 2018
	Midwest Speech and Language Days & CL Colloquium	2017, 2018
	University of Macquarie, Centre for Language Technology	June 2016, August 2017
	Sydney Humans, Language, Technology MeetUp	May 2016, August 2017
	University of Sydney	May 2016
	Information Sciences Institute, Natural Language Seminar	March 2016
	CommonCrawl, Big Open Data Hackathon	May 2014
	Cambridge Computer Laboratory	August 2013
	Berkeley Syntax Circle	2012
	Guest Lecturer	
	The Anatomy of Natural Language Processing Systems, Michigan	Winter 2018
	The Beauty and Joy of Computing, Berkeley	Summer 2014
	Applied Natural Language Processing, Berkeley	Fall 2013
	Proseminar in the Digital Humanities, Berkeley	Spring 2013
	Undergraduate & Masters Mentor	
	Olivia Garrahan (1st year), Michigan CROMA Lab	2018-2019
	Thomas Searle (1st year), Michigan Undergraduate Research Opportunity	2016-2017
	Hyun A. Chung (2nd year), Michigan Undergraduate Research Opportunity	2017-2018
	Orion Cleaver (2nd year), Michigan Undergraduate Research Opportunity	2017-2018
	Alexandra Wu (2nd year), Girls Encoded: Explore CS Research	Spring 2019
	Yuyi Qu (2nd year), Girls Encoded: Explore CS Research	Spring 2019
	Sophia He (2nd year), Michigan CROMA Lab	Fall 2018
	Varun Kutirakulam (2nd year), Michigan CROMA Lab	Fall 2018
	Joseph Peper (transfer), Michigan Undergraduate Research Opportunity	2016-2017
	Jiyong Shim (3rd year), Berkeley NLP Lab	2013-2014
	Philip Su (3rd year), Intern at Naming Matters	Summer 2015
	Kejia Yang (Masters), Michigan CROMA Lab	2018-2019
	Vignesh Athreya (Masters), Michigan Project Sapphire	Spring 2017
	Teaching Assistant	

Artificial Intelligence, Berkeley   Fall 2011
Held sections and office hours, prepared assignments, exams and sections.

Artificial Intelligence (Advanced), Sydney   Fall 2009
Held sections (third year elective Computer Science course).

Informatics (Advanced), Sydney   Fall 2009
Held sections and graded assignments (first year core Computer Science course).

High School Outreach
Australian Informatics Olympiad   2007–2010
Gave lectures, prepared exams and autograders, prepared labs.

National Computer Science School   2007, 2008, 2010
Led a group of 16 high school students, who learned python and built a search engine.

Computational Linguistics Olympiads   2013, 2014, 2015, 2016
Set problems for the competition.

Professional Service
Dialog System Technology Challenges, Task Organiser   2018, 2019

University Internal
Hiring Comittee for Research Investigator, Michigan Medical School   2017
Graduate Admissions Committee, Michigan Artificial Intelligence   2017
Graduate Admissions Committee, Berkeley Artificial Intelligence   2015
President, Berkeley Computer Science Graduate Student Association   2012–2013

Journal Reviewer
TACL: Transactions of the Association for Computational Linguistics   2016
JAIR: Journal of Artificial Intelligence Research   2017
CSL: Computer Speech & Language   2017

Program Committee - Conferences
ACL: Association for Computational Linguistics   2014 (2nd), 2016, 2017, 2018, 2019
NAACL: North American Chapter of the ACL   2015, 2016, 2018, 2019
EACL: European Chapter of the ACL   2017
EMNLP: Empirical Methods in Natural Language Processing   2015, 2016, 2017, 2018, 2019
IJCNLP: International Joint Conference on Natural Language Processing   2017
AAAI: Association for the Advancement of Artificial Intelligence   2016, 2019
IJCAI: International Joint Conference on Artificial Intelligence   2019
WWW: World Wide Web Conference   2016
CoNLL: Conference on Natural Language Learning   2016, 2017, 2018, 2019
UIST: ACM User Interface Software and Technology Symposium   2019

Program Committee - Workshops
SRW: Student Research, NAACL   2015, 2016, 2018, 2019
SRW: Student Research, ACL   2014
EthNLP: Ethics in NLP   2017
RepEval: Evaluating Vector Space Representations for NLP   2019
NLP-CSS: NLP and Computational Social Science   2019
W-NUT: Noisy User-generated Text   2018, 2019
Gen-Deep: New Forms of Generalization in Deep Learning and NLP   2018
DeepLo: Deep Learning for Low Resource NLP   2019

Mentor
Student Research Workshop at NAACL   2019