Rik Koncel-Kedziorski

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Research Interests

Machine Learning • Natural Language Processing • Knowledge Representations • Discourse • Semantics • Text Generation • Language Grounding • Dialog • Representation Learning • Efficient Architectures • Question Answering • Narrative Understanding • Computational Phonology

Education

06/2019	PhD in Computational Linguistics, University of Washington
06/2016	MA in Linguistics, University of Washington
06/2011	BS/BA, The Evergreen State College
11/2008	AA, Miami Dade College

Teaching

INSTRUCTION

Summer 2015	*Instructor*, UW. Ling 200: Introduction to Linguistic Thought
Spring 2013	*Teaching Assistant*, UW. CSE 373: Data Structures and Algorithms
2012-2013	*Teaching Assistant*, UW. Ling 200: Introduction to Linguistic Thought
Winter 2011	*Teaching Assistant*, Evergreen State College. Graphic Programming with Processing

GUEST LECTURES

2020	"Language Models", CSE 573: Artificial Intelligence
	"Machine Translations", UW Translation Hub Lecture Series
2019	"Deep Learning in Computational Linguistics", Ling 472: Introduction to Computational Lingusitics
2018	"Text Generation", CSE 473: Introduction to Artificial Intelligence

2018-2020	Ellen Wu, UW ECE PhD
2019-2020	Kelvin Luu, UW CSE PhD
	Velocity Yu, UW CSE Undergraduate
	Annabell Hu, UW CSE Undergraduate
	Daniel Cheng, UW CSE Undergraduate
	Kyle Yan, UW CSE Masters
	Xinyi Wu, UW Lingustics Masters
	Xuhui Zhou, UW Lingustics Masters
	James Ferguson, UW CSE PhD
2018-2019	Dhanush Bekal, UW ECE Masters
2017-2018	Ben Robaidek, UW CSE Undergraduate
2015-2016	Aida Amini, UW CSE PhD
2014-2015	Sienna Dumas Ang, UW CSE Undergraduate

TUTORING

2015-2016	UW Center for Learning and Undergraduate Education. Ling 100, Ling 200
2011-2012	Villa Maria College. Math, Writing

Work Experience

04/2019-Present	*Postdoctoral Researcher* with Prof. Noah Smith, University of Washington
2013-2019	*Research Assistant* to Prof. Hannaneh Hajishirzi, University of Washington
2017	*Research Consultant* to Ask with CUE Inc.
2014-2015	*Research Consultant* to Point5 Solutions

Grants & Awards

2019	Postdoc Research Award - "Promoting Crowd-participation in Dialog System Research", University of Washington Computer Science
2018	Excellence in Linguistic Research Fellowship, University of Washington
2009-2011	STEM Scholarship, National Science Foundation

Publications

JOURNAL ARTICLES

2015	Rik Koncel-Kedziorski, Hannaneh Hajishirzi, Ashish Sabharwal, Oren Etzioni, and Siena Dumas Ang. "Parsing Algebraic Word Problems into Equations." *Transactions of the Association for Computational Linguistics* 3 (2015): 585-597.

CONFERENCE PAPERS (LONG; FULL PAPER REVIEW)

2020   Sachin Mehta, Rik Koncel-Kedziorski, Mohammad Rastegari, and Hannaneh Hajishirzi. "DeFINE: Deep Factorized Input Word Embeddings for Neural Sequence Modeling". *Eighth International Conference on Learning Representations (ICLR 2020)*

2019   Rik Koncel-Kedziorski, Dhanush Bekal, Yi Luan, Mirella Lapata, and Hannaneh Hajishirzi. "Text Generation from Knowledge Graphs with Graph Transformers". *Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2019)*

Aida Amini, Saadia Gabriel, Shanchuan Lin, Rik Koncel-Kedziorski, Yejin Choi, and Hannaneh Hajishirzi. "Towards Interpretable Math Word Problem Solving with Operation-Based Formalisms". *Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2019)*

2018   Sachin Mehta, Rik Koncel-Kedziorski, Mohammad Rastegari, and Hannaneh Hajishirzi. "Pyramidal Recurrent Units for Language Modeling". *Conference on Empirical Methods in Natural Language Processing (EMNLP 2018)*

2016   Rik Koncel-Kedziorski, Ioannis Konstas, Luke Zettlemoyer, and Hannaneh Hajishirzi. "A Theme-Rewriting Approach for Generating Algebra Word Problems". *Conference on Empirical Methods in Natural Language Processing (EMNLP 2016)*

Kirby Conrod, Rachael Tatman, and Rik Koncel-Kedziorski. "We Who Tweet: Pronominal Relative Clauses on Twitter". *Proceedings of Corpus Linguistics Fest 2016*

Aaron Jaech, Rik Koncel-Kedziorski, Mari Ostendorf. "Phonological Pun-derstanding." *Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2016)*

2014   Rik Koncel-Kedziorski, Hannaneh Hajishirzi, and Ali Farhadi. "Multi-Resolution Language Grounding with Weak Supervision." *Conference on Empirical Methods in Natural Language Processing (EMNLP 2014)*

CONFERENCE PAPERS (SHORT; FULL PAPER REVIEW)

2016   Rik Koncel-Kedziorski, Subhro Roy, Aida Amini, Nate Kushman, and Hannaneh Hajishirzi. "MAWPS: A Math Word Problem Repository". *Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2016)*

PRE-PRINTS

2020   Zeqiu Wu, Rik Koncel-Kedziorski, Mari Ostendorf, Hannaneh Hajishirzi. "Extracting Summary Knowledge Graphs from Long Documents". https://arxiv.org/abs/2009.09162

Zeqiu Wu, Michel Galley, Chris Brockett, Yizhe Zhang, Xiang Gao, Chris Quirk, Rik Koncel-Kedziorski, Jianfeng Gao, Hannaneh Hajishirzi, Mari Ostendorf, Bill Dolan. "A Controllable Model of Grounded Response Generation". https://arxiv.org/abs/2005.00613

Kelvin Luu, Rik Koncel-Kedziorski, Kyle Lo, Isabel Cachola, Noah A. Smith. "Citation Text Generation". https://arxiv.org/abs/2002.00317

2018   Benjamin Robaidek, Rik Koncel-Kedziorski, Hannaneh Hajishirzi. "Data-Driven Methods for Solving Algebra Word Problems". https://arxiv.org/abs/1804.10718

Service

ORGANIZER

2019   SemEval 2019 Task 10: Math Question Answering

PROGRAM COMMITTEE

2020   ACL, EMNLP, CoNLL, CoLING, AAAI, Widening NLP, Narrative Understanding Workshop
2019   ACL, EMNLP, NAACL, *SEM, Workshop on Narrative Understanding, Workshop on Methods for Optimizing and Evaluating Neural Language Generation, Widening NLP Workshop
2018   ACL, EMNLP, NAACL, COLING, AAAI
2017   ACL, EMNLP, EACL, AAAI
2016   ACL, EMNLP, NAACL, EACL, AAAI, Northwest Linguistics Conference

Misc.

TECHNOLOGIES

Machine Learning: Pytorch, Numpy, Scipy, Scikit-learn
Programming: Proficient with Python, Basic experience with Scala, Java, and C

LANGUAGES

Spanish - Intermediate
Mandarin - Beginner