Samuel J. Wiseman

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Current Appointment	**Research Assistant Professor** Toyota Technological Institute at Chicago	Sept. 2018 – present
Education	**Harvard University**, Ph.D., Computer Science Dissertation: *Structured Neural Models for Coreference and Generation* Advisors: Alexander M. Rush, Stuart M. Shieber	Sept. 2012 – May 2018
	Princeton University, A.B., Philosophy, Magna Cum Laude Certificate: Program in Applications of Computing	June 2010
Honors and Awards	**Siebel Scholar**	2018
	Honorable Mention for Best Paper, EMNLP	2016
	Harvard Bok Center Certificate of Distinction in Teaching	Spring 2014, Spring 2016
	Phi Beta Kappa, Princeton University	June 2010

Conference Publications

Learning Discrete Structured Representations by Adversarially Maximizing Mutual Information. Karl Stratos and Sam Wiseman. *ICML*, 2020.

ENGINE: Energy-Based Inference Networks for Non-Autoregressive Machine Translation. Lifu Tu, Richard Yuanzhe Pang, Sam Wiseman, and Kevin Gimpel. *ACL*, 2020.

Discrete Latent Variable Representations for Low-Resource Text Classification. Shuning Jin, Sam Wiseman, Karl Stratos, and Karen Livescu. *ACL*, 2020.

Amortized Bethe Free Energy Minimization for Learning MRFs. Sam Wiseman and Yoon Kim. *NeurIPS*, 2019.

Label-Agnostic Sequence Labeling by Copying Nearest Neighbors. Sam Wiseman and Karl Stratos. *ACL*, 2019.

Controllable Paraphrase Generation with a Syntactic Exemplar. Mingda Chen, Qingming Tang, Sam Wiseman, and Kevin Gimpel. *ACL*, 2019.

A Multi-Task Approach for Disentangling Syntax and Semantics in Sentence Representations. Mingda Chen, Qingming Tang, Sam Wiseman, and Kevin Gimpel. *NAACL*, 2019.

Learning Neural Templates for Text Generation. Sam Wiseman, Stuart M. Shieber, and Alexander M. Rush. *EMNLP*, 2018.

Entity Tracking Improves Cloze-style Reading Comprehension. Luong Hoang, Sam Wiseman, and Alexander M. Rush. *EMNLP*, 2018.

Semi-Amortized Variational Autoencoders. Yoon Kim, Sam Wiseman, Andrew C. Miller, David Sontag, Alexander M. Rush. *ICML*, 2018.

Challenges in Data-to-Document Generation. Sam Wiseman, Stuart M. Shieber, and Alexander M. Rush. *EMNLP*, 2017.

Sequence-to-Sequence Learning as Beam Search Optimization. Sam Wiseman and Alexander M. Rush. *EMNLP*, 2016. Honorable Mention for Best Paper.
- Invited for oral presentation at NeurIPS 2016 Deep Learning Symposium

Learning Global Features for Coreference Resolution. Sam Wiseman, Alexander M. Rush, and Stuart M. Shieber. *NAACL*, 2016.

Learning Anaphoricity and Antecedent Ranking Features for Coreference Resolution. Sam Wiseman, Alexander M. Rush, Stuart M. Shieber, and Jason Weston. *ACL*, 2015.

Discriminatively Reranking Abductive Proofs for Plan Recognition. Sam Wiseman and Stuart Shieber. *ICAPS*, 2014.

Workshop and Preprint Papers	Learning Deep Latent-variable MRFs with Amortized Bethe Free Energy Minimization. Sam Wiseman. DeepGenStruct at ICLR, 2019.

A Tutorial on Deep Latent Variable Models of Natural Language. Yoon Kim*, Sam Wiseman*, Alexander M. Rush. arXiv:1812.06834. EMNLP 2018 Tutorial Document.

Training Language Models Using Target-Propagation. Sam Wiseman, Sumit Chopra, Marc'Aurelio Ranzato, Arthur Szlam, Ruoyu Sun, Soumith Chintala, Nicolas Vasilache. arXiv:1702.04770, February 2017.

Antecedent Prediction without a Pipeline. Sam Wiseman, Alexander M. Rush, and Stuart M. Shieber. CORBON Workshop, June 2016.

Extracting Multi-word, Entity-specific Topics and their Interrelations from Online Medical Forums. Sam Wiseman, Andrew Miller, Finale Doshi-Velez, and Stuart M. Shieber. MUCMD Workshop, August 2015.

Service

- Area Chair (Generation Track): ACL 2020, EMNLP 2020
- Organizing Committee: Midwest Speech and Language Days, 2019
- EMNLP 2018 Tutorial: Deep Latent Variable Models of Natural Language
- Reviewing: TACL, ACL, NAACL, EMNLP, ICML, ICLR, NeurIPS, COLING, Computational Linguistics
  - NAACL 2018 Outstanding Reviewer
- Workshop Program Committees: CORBON at EACL 2017, CRAC at NAACL 2018, NeuralGen at NAACL 2019, DSNNLG at INLG 2019, WNGT at EMNLP 2019

Teaching Experience

Teaching Fellow

- Harvard CS 287: Statistical Natural Language Processing	Spring 2016
- Harvard CS 187: Computational Linguistics	Fall 2014
- Harvard CS 181: Machine Learning	Spring 2014

Mentoring

Student Mentees

- Shuning Jin (Rutgers U.), visiting student at TTIC	Summer 2019 - Spring 2020
- Tianyu Liu (Peking U.), visiting student at TTIC	Summer 2019 - Fall 2020
- Shira Eisenberg (UChicago), undergraduate directed research	2018 - 2019

Thesis Committees

- Lifu Tu (TTIC)	2020 - present

Academic Internships

Facebook AI Research, New York, NY

Research Intern   Summer 2016, Summer 2017

- Research on retrieval-based text generation, with Marc'Aurelio Ranzato, Arthur Szlam, and Mike Lewis (Summer 2017)
- Research on training RNNs with target-propagation, with Sumit Chopra, Marc'Aurelio Ranzato, and Arthur Szlam (Summer 2016)

Work Experience

Wireless Generation, Brooklyn, NY

Software Developer, Reporting and Analytics Team   Feb. 2012 – July 2012

Columbia University, New York, NY

Research Programmer, Spoken Language Processing Group   Sept. 2011 – Jan. 2012

Morgan Stanley, New York, NY

Software Developer, Prime Brokerage Margin Calculation Team   July 2010 – June 2011

Invited	Invited Talk, Google Ads Research	December 2018
Talks	Collaborative & Knowledge-backed Language Generation Workshop, TTIC	July 2018
	Invited Talk, Boston University	February 2018
	Invited Talk, Wesleyan University	February 2018
	Invited Talk, TTIC	January 2018
	NeurIPS Deep Learning Symposium	December 2016
	Kensho (company) Research Meeting	February 2016
	Boston Children's Hospital NLP Lab Reading Group	September 2015
	Meaningful Use of Complex Medical Data (MUCMD) Conference	August 2015

Open Source Projects

nn_coref (https://github.com/swiseman/nn_coref)
- A neural coreference system.

BSO (https://github.com/harvardnlp/BSO)
- Beam Search Optimization with seq2seq models.

TPRNN (https://github.com/facebookresearch/TPRNN)
- Training language models with target propagation

data2text (https://github.com/harvardnlp/data2text)
- A system for generating and evaluating summaries of structured data.

neural-template-gen (https://github.com/harvardnlp/neural-template-gen)
- A system for extracting template-like structures from text and generating with them.