

# Antoine Bosselut

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antoineb@cs.washington.edu

<https://atcbosselut.github.io/>

<https://twitter.com/ABosselut>

EDUCATION	<b>Doctor of Philosophy</b> , University of Washington, Seattle, WA Major: Computer Science Research Areas: Natural Language Processing, Machine Learning Advisor: Yejin Choi	2014 - Present
	<b>Master of Science</b> , University of Washington, Seattle, WA Major: Computer Science	2014 - 2016
	<b>Bachelor of Engineering</b> , McGill University, Montreal, QC Major: Honours Electrical Engineering Minor: Finance	2009 - 2014
PUBLICATIONS & PREPRINTS	<b>Antoine Bosselut</b> , Hannah Rashkin, Maarten Sap, Chaitanya Malaviya, Asli Celikyilmaz, and Yejin Choi. COMET: Commonsense Transformers for Automatic Knowledge Graph Construction. In <i>Proceedings of the Association for Computational Linguistics (ACL)</i> . 2019.	
	Saadia Gabriel, <b>Antoine Bosselut</b> , Ari Holtzman, Kyle Lo, Asli Celikyilmaz and Yejin Choi. Cooperative Generator-Discriminator Networks for Abstractive Summarization with Narrative Flow. In <i>arXiv preprint arXiv:1907.01272</i> . 2019.	
	Andrew Hoang, <b>Antoine Bosselut</b> , Asli Celikyilmaz, and Yejin Choi. Efficient Adaptation of Pretrained Transformers for Abstractive Summarization. In <i>arXiv preprint arXiv:1906.00138</i> . 2019.	
	Xinya Du, Bhavana Dalvi, Niket Tandon, <b>Antoine Bosselut</b> , Wen-tau Yih, Peter Clark and Claire Cardie. Be Consistent! Improving Procedural Text Comprehension using Label Consistency. In <i>Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL)</i> . 2019.	
	<b>Antoine Bosselut</b> , Omer Levy, Ari Holtzman, Corin Ennis, Dieter Fox, and Yejin Choi. Simulating action dynamics with neural process networks. In <i>Proceedings of the 6th International Conference on Learning Representations (ICLR)</i> . 2018.	
	<b>Antoine Bosselut</b> , Asli Celikyilmaz, Xiaodong He, Jianfeng Gao, Po-sen Huang, and Yejin Choi. Discourse-aware neural rewards for coherent text generation. In <i>Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL)</i> . 2018.	
	Asli Celikyilmaz, <b>Antoine Bosselut</b> , Xiaodong He, and Yejin Choi. Deep communicating agents for abstractive summarization. In <i>Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL)</i> . 2018.	
	Hannah Rashkin, <b>Antoine Bosselut</b> , Maarten Sap, Kevin Knight, and Yejin Choi. Modeling Naïve Psychology of Characters in Simple Commonsense Stories. In <i>Proceedings of the Association for Computational Linguistics (ACL)</i> . 2018.	
	Ari Holtzman, Jan Buys, Maxwell Forbes, <b>Antoine Bosselut</b> , David Golub, and Yejin Choi. Learning to Write with Cooperative Discriminators. In <i>Proceedings of the Association for Computational Linguistics (ACL)</i> . 2018.	

Niket Tandon, Bhavana Dalvi, Joel Grus, Wen-tau Yih, **Antoine Bosselut**, and Peter Clark. Reasoning about Actions and State Changes by Injecting Commonsense Knowledge. In *Empirical Methods in Natural Language Processing (EMNLP)*. 2018.

**Antoine Bosselut**, Jianfu Chen, David Warren, Hannaneh Hajishirzi, and Yejin Choi. Learning prototypical event structure from photo albums. In *Proceedings of the Association for Computational Linguistics (ACL)*. 2016

**Antoine Bosselut**. Covariance estimation in portfolio optimization. *Bachelor's Degree Thesis, McGill University*. 2013

## AWARDS & HONORS

AI2 Key Scientific Challenges Award	2018
Dean's Honor List	2010, 2012 - 2014
Brian Cullen Memorial Award	2013
Brodeur-Drummond Scholarship	2012
Motorola Foundation Scholarship	2010
Alma Mater Scholarship	2009
Certificate of Meritorious Service	2009

## SKILLS

**Languages:** *Fluent:* Python, Lua, Java; *Functional:* HTML, SQL, MATLAB, L<sup>A</sup>T<sub>E</sub>X.  
**Packages/Tools:** PyTorch, Torch7, NumPy, SciPy, Pandas, Scikit-learn, NLTK  
**Languages:** *Fluent:* English, French; *Beginner:* Spanish

## EXPERIENCE

**Student Researcher** 2018 - Present  
 Allen Institute for Artificial Intelligence Seattle, WA  
 Ongoing projects related to integrating common sense reasoning into internal transformations of neural network architectures.

**Student Researcher** 2017 - 2018  
 Microsoft Research Redmond, WA  
 Investigated multi-agent architectures for learning to exhibit diverse behaviors in dialogue response generation

**Research Intern** 2017  
 Microsoft Research Redmond, WA  
 Investigated neural scoring functions for evaluating discourse structure in recipes and using them to train coherent recipe generators. Work published at *NAACL* 2018.

**Technology Summer Analyst** 2011  
 Morgan Stanley Montreal, QC  
 Designed internal search engine to locate information security officers, improving efficiency of granting authorizations for sensitive applications.

**Bioinformatics Intern** 2010  
 National Institutes of Health (NIH) Bethesda, MD  
 Advised by John O'Shea and Golnaz Vahedi. Identified non-protein-coding RNAs based on epigenetic markers in large-scale DNA sequencing data.

## TEACHING

**Teaching Assistant**  
 Machine Learning, University of Washington 2015  
 Foundations of Computing I, University of Washington 2014  
 Design Principles and Methods, McGill University 2013 - 2014

## Lectures

<i>Transformers for Deep Contextual Representations</i> - University of Washington	2019
<i>GANs for Text Generation</i> - University of Washington	2018
<i>Reinforcement Learning for Text Generation</i> - University of Washington	2017
<i>RNNs and LSTMs</i> - University of Washington	2015
<i>Clustering and EM for GMMs</i> - University of Washington	2015
<i>Naïve Bayes</i> - University of Washington	2015
<i>Threads and Synchronization</i> - McGill University	2014

## PRESENTATIONS Research Talks

<i>COMET: Commonsense Transformers for Automatic Knowledge Graph Construction</i>	
Allen Institute for Artificial Intelligence Team Meeting	2019
DARPA Communicating with Computers Meeting	2019

<i>Discourse-aware Neural Rewards for Coherent Text Generation</i>	
SRI DIVA Site Visit	2019
North American Association for Computational Linguistics Conference (Poster)	2018
Microsoft Research AI Breakthroughs Workshop (Poster)	2018
Samsung Research Seminar	2018

<i>Simulating Action Dynamics with Neural Process Networks</i>	
International Conference for Learning Representations (Poster)	2018
5th Pacific Northwest Regional NLP Workshop	2018
Allen Institute for Artificial Intelligence (AI2) Invited Talk	2018
Samsung Research Seminar	2018
DARPA Communicating with Computers Meeting	2017
UW CSE Affiliates Day	2017

<i>Deep Communicating Agents for Abstractive Summarization</i>	
North American Association for Computational Linguistics Conference (Poster)	2018

<i>Modeling Naïve Psychology of Characters in Simple Commonsense Stories</i>	
DARPA Communicating with Computers Meeting	2018

<i>Learning Prototypical Event Structure from Photo Albums</i>	
Association for Computational Linguistics Conference (ACL)	2016
University of Washington PhD Qualifying Exam	2016
UW CSE Affiliates Day (Poster)	2015

<i>Coherent Text Generation from Structured Context</i>	
DARPA Communicating with Computers Meeting	2016

<i>Portfolio Management using Minimum Variance Distortionless Response Filtering</i>	
Bachelor's Degree Thesis Defense	2013

## Miscellaneous

<i>Graduate School: Is it the right next step?</i>	
McGill University Invited Talk	2015
<i>CoPilot Solutions: Professional Cloud Accounting</i>	
Rho Canada Ventures Pitch	2013

**SERVICE****Organizing Committee:**

NAACL Workshop on Optimizing and Evaluating Neural Generation (NeuralGen) 2019  
West Coast NLP Summit (WeCNLP) 2018, 2019

**Conference Program Committee/Reviewer (OR - Outstanding Reviewer):**

AAAI Conference on Artificial Intelligence (*AAAI*) 2019  
Association for Computational Linguistics (*ACL*) 2018 (**OR**)  
Conference on Computer Vision and Pattern Recognition (*CVPR*) 2017  
Empirical Methods in Natural Language Processing (*EMNLP*) 2016, 2018, 2019  
International Conference for Learning Representations (*ICLR*) 2019  
International Conference for Machine Learning (*ICML*) 2019  
International Conference on Computational Linguistics (*COLING*) 2018  
International Joint Conference on Natural Language Processing (*IJCNLP*) 2017  
Neural Information Processing Systems (*NeurIPS*) 2019  
North American Association for Computational Linguistics (*NAACL*) 2019 (**OR**)

**Workshop Program Committee/Reviewer**

NAACL Workshop on Optimizing and Evaluating Neural Generation (*NeuralGen*) 2019  
NAACL Workshop on Narrative Understanding (*WNU*) 2019  
NAACL Workshop on Generalization in Deep Learning and NLP (*GenDeep*) 2018

**Miscellaneous:**

University of Washington CSE Graduate Admissions Committee 2019  
University of Washington NLP PR Committee 2019  
University of Washington CSE Visit Days Organizing Committee 2016  
University of Washington CSE TGIF Committee 2016  
University of Washington NLP Reading Groups 2016

**PROFESSIONAL  
ACTIVITIES**

**Business Plan**, Co-Pilot Solutions 2013  
Constructed business plan for a sole proprietor and small business accounting software firm. Pitched business model to Rho Canada Ventures.

**McGill-iNovia Tech Innovation Day Organizing Committee** 2012 - 2013

Managed \$11,000 budget raised from corporate sponsors to fund the conference.

Press: <http://www.techvibes.com/blog/mcgill-tech-innovation-day-2013-04-05>