

# Swabha Swayamdipta

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## Research Interests

Spurious and Social Biases in Datasets and Models, Inductive Biases for Structured Prediction and Unsupervised Learning

## Positions

**Allen Institute for AI (Mosaic)**

*Postdoctoral Young Investigator*

Seattle, WA, USA

Aug 2019-Present

## Education

**Carnegie Mellon University**

*PhD in Language and Information Technologies, School of Computer Science*

Pittsburgh, PA, USA

May 2019

– Advised by Noah A. Smith and Chris Dyer

– Visiting student at University of Washington from Summer 2015-9

**Columbia University**

*Masters in Computer Science (specialization in Natural Language Processing)*

City of New York, NY, USA

2013

– Advised by Owen Rambow and Michael Collins

**National Institute of Technology**

*BTech in Computer Science and Engineering*

Calicut, Kerala, India

2006 - 2010

## Awards and Nominations

**Best Paper - Honorable Mention**

ACL 2020

*Don't Stop Pretraining: Adapt Language Models to Domains and Tasks*

## Selected Papers

### Peer-reviewed Publications (Long)

**Dataset Cartography: Mapping and Diagnosing Datasets with Training Dynamics**

EMNLP 2020

*S. Swayamdipta, R. Schwartz, N. Lourie, Y. Wang, H. Hajishirzi, N. A. Smith, Y. Choi*

**G-DAUG: Generative Data Augmentation for Commonsense Reasoning**

EMNLP 2020

*Y. Yang, C. Malaviya, J. Fernandez, S. Swayamdipta,*

*R. LeBras, J. Wang, C. Bhagavatula, Y. Choi, and D. Downey*

**Adversarial Filters of Dataset Biases**

ICML 2020

*R. LeBras, S. Swayamdipta, C. Bhagavatula, R. Zellers, M. E. Peters, A. Sabharwal, and Y. Choi*

**The Right Tool for the Job: Matching Model and Instance Complexities**

ACL 2020

*R. Schwartz, G. Stanovsky, S. Swayamdipta, J. Dodge, and N. A. Smith*

<b>Dont Stop Pretraining: Adapt Language Models to Domains and Tasks</b> <i>S. Gururangan, A. Marasović, <u>S. Swayamdipta</u>, K. Lo, I. Beltagy, D. Downey, and N. A. Smith</i>	ACL 2020
<b>Syntactic Scaffolds for Semantic Structures.</b> <i><u>S. Swayamdipta</u>, S. Thomson, K. Lee, L. Zettlemoyer, C. Dyer, N. A. Smith.</i>	EMNLP 2018
<b>Learning Joint Semantic Parsers from Disjoint Data.</b> <i>H. Peng, S. Thomson, <u>S. Swayamdipta</u>, N. A. Smith</i>	NAACL 2018
<b>Multi-Mention Learning for Reading Comprehension with Neural Cascades.</b> <i><u>S. Swayamdipta</u>, A. Parikh, T. Kwaitkowski</i>	ICLR 2018
<b>Multi-Task Learning for Incremental Parsing using Stack LSTMs</b> <i><u>S. Swayamdipta</u>, M. Ballesteros, C. Dyer, N. A. Smith</i>	WiML/NeurIPS 2016
<b>Greedy, Joint Syntactic and Semantic Parsing with Stack LSTMs</b> <i><u>S. Swayamdipta</u>, M. Ballesteros, C. Dyer, N. A. Smith</i>	CoNLL 2016
<b>A Dependency Parser for Tweets</b> <i>L. Kong, N. Schneider, <u>S. Swayamdipta</u>, A. Bhatia, C. Dyer, N. A. Smith</i>	EMNLP 2014
<b>CMU: Arc-Factored, Discriminative Semantic Dependency Parsing</b> <i>S. Thomson, D. Bamman, J. Dodge, <u>S. Swayamdipta</u>, N. Schneider, C. Dyer, N. A. Smith</i>	SemEval 2014
<b>The CMU Machine Translation Systems</b> <i>A. Matthews, C. Dyer, A. Lavie, G. Hanneman, W. Ammar, A. Bhatia, <u>S. Swayamdipta</u>, E. Schlinger, Y. Tsvetkov</i>	WMT 2014
<b>The Pursuit of Power and its Manifestation in Written Dialog</b> <i><u>S. Swayamdipta</u>, O. Rambow</i>	ICSC 2012

## Peer-reviewed Publications (Short)

<b>Polyglot Semantic Role Labeling.</b> <i>P. Mulcaire, <u>S. Swayamdipta</u>, N. A. Smith</i>	ACL 2018
<b>Annotation Artifacts in Natural Language Inference Data.</b> <i>S. Gururangan*, <u>S.Swayamdipta</u>*, O.Levy, R.Schwartz, S.R.Bowman, N.A.Smith</i> <i>*Equal Contribution</i>	NAACL 2018

## Working Papers

<b>Shallow Syntax in Deep Water.</b> <i><u>S. Swayamdipta</u>, M. Peters, B. Roof, C. Dyer and N. A. Smith.</i>	arXiv:1908.11047
<b>Frame-Semantic Parsing with Softmax-Margin Segmental RNNs and a Syntactic Scaffold.</b> <i><u>S. Swayamdipta</u>, S. Thomson, C. Dyer and N. A. Smith.</i>	arXiv:1706.09528
<b>DyNet: The Dynamic Neural Network Toolkit</b> <i>G. Neubig, C. Dyer, Y. Goldberg, A. Matthews, W. Ammar, A. Anastasopoulos, M. Ballesteros, D. Chiang, D. Clothiaux, T. Cohn, K. Duh, M. Faruqui, C. Gan, D. Garrette, Y. Ji, L. Kong, A. Kuncoro, G. Kumar, C. Malaviya, P. Michel, Y. Oda, M. Richardson, N. Saphra, <u>S. Swayamdipta</u>, P. Yin</i>	arXiv:1701.03980

## Research Experience

### **Allen Institute for AI**

*Research Intern*

Seattle, WA, USA

Summer-Fall 2018

- Shallow Syntactic Priming of Large-scale Language Models
- Host: Matthew E. Peters

### **Google Inc.**

*Research Intern*

New York, NY, USA

Summer 2017

- Machine Comprehension for Google Neon
- Host: Ankur Parikh

## Teaching Experience

- Tutorial on Transfer Learning in NLP at NAACL 2019.
- Tutorial on Multilingual FrameNet at COLING 2018.
- Guest lecture on Minimum Bayes Risk decoding in CSE 599 D1: Advanced Topics in NLP, Spring 2018, UW
- Guest lecture on Dependency Parsing for CSEP 517: NLP, Spring 2018, UW
- Guest lecture on Unsupervised Learning for CSE 446 ML, Fall 2017, UW
- Teaching assistant, Undergrad NLP (11-411), Spring 2015, CMU
- Guest lecturer, Algorithms for NLP (11-711), Fall 2014, CMU

## Industry Experience

### **Google Inc.**

*Software Development Intern*

Mountain View, CA, USA

Summer 2012

- Information retrieval evaluation for Google TV search

### **Oracle Server Technologies**

*Member Technical Staff*

Bangalore, India

2010 - 2011

- Unified messaging for Fusion Middleware

### **Microsoft Corporation**

*Software Development Intern*

Hyderabad, India

Summer 2009

- Search functionality for customer hierarchies

## Invited Talks

<b>Microsoft E+D Product Leads</b> <i>Responsible AI: Addressing Biases in Datasets and Models</i>	Microsoft (Virtual) Nov 2, 2020
<b>Rising Stars in EECS</b> <i>Learning Challenges in Natural Language Processing</i>	University of Illinois-Urbana Champaign Oct 30, 2019
<b>Colloquium, Department of Linguistics</b> <i>Sprucing up a Dataset: Adversarially Filtering Dataset Artifacts</i>	University of Washington Oct 18, 2019
<b>AI2 Seminar</b> <i>Learning Challenges in Natural Language Processing</i>	Allen Institute of Artificial Intelligence Apr 8, 2019
<b>Stanford NLP Seminar</b> <i>Learning Challenges in Natural Language Processing</i>	Stanford University Apr 4, 2019
<b>JHUCLSP Seminar</b> <i>Learning Challenges in Natural Language Processing</i>	Johns Hopkins University, Baltimore Mar 13, 2019
<b>CILVR Seminar</b> <i>Learning Challenges in Natural Language Processing</i>	New York University, New York Mar 11, 2019
<b>MSR Seminar</b> <i>Learning Challenges in Natural Language Processing</i>	Microsoft Research, Redmond Jan 22, 2019
<b>NorthWest NLP</b> <i>Syntactic Scaffolds for Semantic Structures</i>	Microsoft Research, Redmond Apr 27, 2018

## Professional Service

Area Chair for Sentence-Level Semantics at NAACL 2021.

Area Chair for Sentence-Level Semantics at EACL 2021.

Area Chair for Semantics: Long at ACL 2020.

Organizer of the Workshop on Deep Learning in Low Resource NLP to be held at EMNLP 2019.

Reviewer for ACL and NAACL 2015-2020, EMNLP 2015-2020; NAACL SRW 2016; NeurIPS 2018-2020; ICML, 2015,2019,2020; WiML at NeurIPS 2016; EACL 2017; MRQA Workshop 2017, AAAI 2017-9, CoNLL 2017-8.

Organizer of the DeepLo Workshop at EMNLP 2019.

Gradswomen Events Organizer at Paul G. Allen School of Computer Science Engineering University of Washington, 2017-19.

Faculty Recruiting Liaison at Paul G. Allen School of Computer Science Engineering University of Washington, 2019.

Organizer of West Coast NLP Workshop 2018 by Facebook.

Outreach event at Highline High School, Tacoma, WA, 2017

Organizer of Women's Research Day at University of Washington, 2017.

# References

**Noah A. Smith**  
*nasmith@cs.washington.edu*

**Yejin Choi**  
*yejin@cs.washington.edu*

**Chris Dyer**  
*cdyer@google.com*

**Luke Zettlemoyer**  
*lsz@cs.washington.edu*