

EMILY ALLAWAY

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EDUCATION

Columbia University, New York, NY

Sept. 2018 – Present

M.S./Ph.D. Student, Computer Science – Natural Language Processing

Advisor: Professor Kathleen McKeown

AthNLP Summer School, Athens, Greece

Sept. 2019

Week-long series of lectures, seminars, and labs on a range of topics in NLP

University of Washington, Seattle, WA

Sept. 2014 – June 2018

Graduated cum laude, GPA: 3.82/4.0

Bachelor of Science (B.S.) in Computer Science

Bachelor of Science (B.S.) in Mathematics

Minor in Ancient Greek

RESEARCH INTERESTS

- **Implicit Knowledge:** developing new computational models and resources for understanding implied meaning in text: connotations, offensive implications, sentiment, and unstated opinions.
- **Multilingual Methods:** expanding resources and methods for implicit meaning to have wide natural language applicability.

RESEARCH EXPERIENCE

Graduate Research

Department of Computer Science, Columbia University

- **Lexical Connotations:** creating a new lexicon for noun and adjective connotations and using a multi-task architecture to learn connotation embeddings that improve stance detection for topics with limited training data.
- **Stance Detection:** creating a new dataset for zero-shot and few-shot stance detection and a model that improves performance on a number of challenging linguistic phenomena (EMNLP 2020), ongoing work on using adversarial learning for zero-shot topic transfer.
- **Relation Extraction:** developing multilingual relation extraction methods using sentiment and implicit knowledge for a range of languages (TAC 2018, TAC 2019), using events to denoise unsupervised relation training data to produce strong results with minimized computation cost (COLING 2020).

Undergraduate Research

Paul G. Allen School of Computer Science and Engineering, University of Washington

- **Commonsense knowledge bases:** collected annotations on motivations for and reactions to events (ACL 2018), extended the knowledge based to form *ATOMIC*, a resource of almost 900k textual descriptions of inferential knowledge about events (AAAI 2019). Work with Professor Yejin Choi, Hannah Rashkin, and Maarten Sap.
- **Lexical Connotations:** developed a new multi-task neural architecture to predict verb connotations from dictionary definitions (2017). Work with Professor Yejin Choi and Hannah Rashkin. 2017

PUBLICATIONS

- *A Unified Feature Representation for Lexical Connotations*. **Emily Allaway** and Kathleen McKeown. arXiv.
- *Event-Guided Denoising for Multilingual Relation Learning* Amith Ananthram, **Emily Allaway**, Kathleen McKeown. In COLING 2020.
- *Zero-Shot Stance Detection: A Dataset and Model using Generalized Topic Representations*. **Emily Allaway** and Kathleen McKeown. In EMNLP 2020.
- *GAIA at SM-KBP2019 - A Multi-media Multi-lingual Knowledge Extraction and Hypothesis Generation System*. Manling Li, Ying Lin, Ananya Subburathinam, Spencer Whitehead, Xiaoman Pan, Di Lu, Qingyun Wang, Tongtao Zhang, Lifu Huang, Heng Ji, Alireza Zareian, Hassan Akbari, Brian Chen, Bo Wu, **Emily Allaway**, Shih-Fu Chang, Kathleen McKeown, Yixiang Yao, Jennifer Chen, Eric Berquist, Kexuan Sun, Xujun Peng, Ryan Gabbard, Marjorie Freedman, Pedro Szekely, T.K. Satish Kumar, Arka Sadhu, Ram Nevatia, Miguel Rodriguez, Yifan Wang, Yang Bai, Ali Sadeghian, Daisy Zhe Wang. In TAC 2019.
- *ATOMIC: An Atlas of Machine Commonsense for If-Then Reasoning*. Maarten Sap, Ronan Le Bras, **Emily Allaway**, Chandar Bhagavatula, Nicholas Lourie, Hannah Rashkin, Brendan Roof, Noah A. Smith, Yejin Choi. In AAAI 2019.
- *GAIA - A Multi-media Multi-lingual Knowledge Extraction and Hypothesis Generation System*. Tongtao Zhang, Ananya Subburathinam, Ge Shi, Lifu Huang, Di Lu, Xiaoman Pan, Manling Li, Boliang Zhang, Qingyun Wang, Spencer Whitehead, Heng Ji, Alireza Zareian, Hassan Akbari, Brian Chen, Ruiqi Zhong, Steven Shao, **Emily Allaway**, Shih-Fu Chang, Kathleen McKeown, Dongyu Li, Xin Huang, Kexuan Sun, Xujun Peng, Ryan Gabbard, Marjorie Freedman, Mayank Kejriwal, Ram Nevatia, Pedro Szekely, T.K. Satish Kumar, Ali Sadeghian, Giacomo Bergami, Sourav Dutta, Miguel Rodriguez, Daisy Zhe Wang. In TAC 2018.
- *Event2Mind: Commonsense Inference on Events, Intentions, and Reactions*. Hannah Rashkin, Maarten Sap, **Emily Allaway**, Noah A. Smith and Yejin Choi. In ACL 2018.

WORK EXPERIENCE

Amazon Science Research Intern

Summer 2020 – Fall 2020

Worked with Miguel Ballesteros as a graduate research intern on cross-document coreference resolution.

TEACHING EXPERIENCE

Teaching Assistant, NLP (Advanced Undergrad/Grad)

Sept. 2019 – Dec. 2019

Columbia University

Designed and graded homework assignments, held office hours and graded exams.

Teaching Assistant Student Coordinator, CSE 14X (Intro CS)

Dec. 2016 – Dec. 2017

Paul G. Allen School of Computer Science and Engineering, University of Washington

Interviewed and selected new TAs for CSE 142/143 each quarter, ran training for new TAs, visited weekly TA class sections and provided feedback.

Teaching Assistant, CSE 14X (Intro CS)

Mar. 2015 – Dec. 2016

Paul G. Allen School of Computer Science and Engineering, University of Washington

Developed criteria for grading homework assignments, reviewed other TA grading, taught a weekly 20-25 person class section and graded assignments, held office hours, and graded exams.

SERVICE

Co-Organizer: Columbia University NLP Seminar
Organizer: NLP Classics Reading Group at Columbia University

Winter 2020 - Present
Fall 2020

ACADEMIC AWARDS

NSF Graduate Research Fellowship <i>National Science Foundation</i>	Spring 2019 – Present
Denice Dee Denton Scholars Endowment <i>Paul G. Allen School of Computer Science and Engineering, University of Washington</i>	Sept. 2016
Jim Greenfield Scholarship <i>Department of Classics, University of Washington</i>	Sept. 2016
Harvey Densmore Scholarship <i>Department of Classics, University of Washington</i>	Sept. 2016
Funding to attend: Grace Hopper Celebration of Women in Computing <i>Paul G. Allen School of Computer Science and Engineering, University of Washington</i>	Sept. 2016