

Curriculum Vitae

Austin Blodgett

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EDUCATION

Georgetown University, Washington, D.C.
PhD student of Computational Linguistics
Overall GPA: 3.890/4.000

August 2016 – Present

Emory University, Atlanta, GA

Bachelor of Science - Double Major in Computer Science (With Highest Honors) and Linguistics
Overall GPA: 3.902/4.000

May 2015

LANGUAGE PROFICIENCY

Native Language: English

Intermediate Level: Japanese (2.5 Years of Courses)

Basic Level: Russian, Hebrew, Latin, Spanish

TECHNICAL SKILLS

Languages: Java, C, C++, Python, SQL, R

Operating Systems: Unix, Linux, Mac OS, Windows

Computational Linguistics/Natural Language Processing Libraries and Software:

Pytorch, Keras, Stanford Syntactic Parsers, Tregex (syntactic tree manipulation), ClearNLP Dependency Parser, WordNet, VerbNet, NLTK Library, Word2Vec, Latent Dirichlet Allocation, Annis for Multi-Layer Corpora.

GRADUATE LEVEL COURSEWORK

- CS 571 Natural Language Processing (Emory)
- COSC 572 Empirical Methods in NLP
- LING 367 Computational Corpus Linguistics
- COSC 575 Machine Learning
- LING 469 Analyzing Language Data with R
- COSC 672 Adv. Semantic Representations
- LING 461 Speech Processing
- COSC 482 Statistical Machine Translation
- LING 485 Cognitive Grammar

Essential Publications

Ramon Astudillo, Miguel Ballesteros, Tahira Naseem, Austin Blodgett, & Radu Florian (2020). *Transition-based Parsing with Stack-Transformers*. In Proc. of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP).

Austin Blodgett and Nathan Schneider (2019). *An Improved Approach for Semantic Graph Composition with CCG*. In Proc. of the 13th International Conference on Computational Semantics, Gothenburg, Sweden.

Austin Blodgett and Nathan Schneider (2018). *Semantic supersenses for English possessives*. In Proc. of LREC, Miyazaki, Japan.

Nathan Schneider, Jena D. Hwang, Vivek Srikumar, Jakob Prange, Austin Blodgett, Sarah R. Moeller, Aviram Stern, Adi Bitan, and Omri Abend (2018). *Comprehensive Supersense Disambiguation of English Prepositions and Possessives*. In Proc. of ACL (pp. 185-196).

RELEVANT WORK EXPERIENCE

Georgetown University, Dept. of Linguistics

Research Assistant

August 2016 – Present

- *GME Project* – The Gradable Modal Expression (GME) Corpus is a large database of English text annotated for linguistic modality. I have helped implement GME’s design, search, and display features.
- *Supersense Project* - semantic supersense corpus and schema for annotating the semantics of prepositions and other grammatical relations. The schema includes location, time, and thematic roles and allows construal of semantics in a metaphorical frame, consistent with interpretations of semantics as embodied cognition. One result of this project is my LREC 2018 paper on expanding application of these supersenses to possessive constructions.
- *Semantic Parsing* – A core focus of my research is on computational representations and parsing of language meaning. I have conducting research on alignment, theory, and parsing of Abstract Meaning Representation (AMR), a prominent formalism for computational representation of sentence meaning. My research in this area has resulted in two publications – the first at IWCS 2019 and the second at Findings of EMNLP 2020. Ongoing research includes improved and comprehensive alignment, improving evaluation, and incorporating syntactic features into parsing models.

Teaching Assistant

January 2018 – Present

- Teaching assistant for the graduate-level course *Empirical Methods in Natural Language Processing*
- Duties included giving guest lectures, designing homework, grading written assignments and code, advising student on course projects, working with students in office hours and elsewhere to understand course material.

International Business Machines (IBM), - Yorktown Heights, NY.

June 2019 – August 2019

Research Intern

- Intern in the Multilingual Natural Language Processing Group conducting research on semantic parsing.
- *Project, Semantic Parsing* – The main focus of the internship was research on Abstract Meaning Representation (AMR) parsing using a transition-based framework and sequence-to-sequence neural network models.
- Duties included writing software, designing and conducting experiments, and presenting research to an audience of IBM employees.
- *Software Experience*, extensive experience with two neural network software libraries Pytorch and Dynet as well as experience working with sequence-to-sequence neural network models and transformers.

International Justice Mission (IJM)

June 2017 – August 2017

Research & Data Intern

- Intern for an anti-slavery non-profit organization - IJM - in the department for Research & Data.
- Duties included data analysis of donation information with tools from machine learning, and leading a workshop on *Data Analysis with R*.

Mind and Language Lab, - Emory University, Dept. of Psychology

August 2013 – July 2016

Research Assistant

- *General description* – Design and oversee various research projects with computational domains, including individual and group research. Research fields include Computational Linguistics, Natural Language Processing, Word Meaning Representation, and Distributional Semantics.

- *Software Experience*, Re-implementing Latent Dirichlet Allocation (LDA) – LDA is a learning algorithm designed as a probabilistic graphical model, most commonly used for topic modelling. My re-implementation of LDA is in Java (see *Verbiverse*).
- *Software Experience*, Re-implementing Word2vec – Word2vec is Google’s algorithm for learning and encoding word meanings as vector representations using a neural network. My re-implementation of Word2vec is in Java.
- *Project, Verbiverse* – Our aim of the Verbiverse project was to build a library of vector representations of verb meanings, arranged by similarity. The project is based on two large corpora – Wikipedia and New York Times – along with several natural language processing and machine learning methods, such as LDA and word2vec.
- *Project, Triad Evaluation Task* – Our Triad Evaluation Task was developed as way of evaluating machine judgements of verb similarity against human judgements of similarity.

Emory University, Dept. of Linguistics

January 2016 – May 2016

Teaching Fellow

- Teaching Fellow at Emory for two sections of the course *Ling 401: Language, Mind & Society*.
- Duties included leading class discussions, grading essays, and meeting with students to talk about possible paper topics.

Electric Power Research Institute (EPRI), Knoxville, Tennessee

June 2013 – August 2013

Intern

- Researched and compiled reports of newly developed electric-power technology to compare capabilities and restrictions. Research included interviews of electric-power developers.
- Designed and Implemented code for database and data mining related tasks, and general data analysis.

HONORS

- Highest Honors in Computer Science (for a thesis in computational linguistics)
- *Honors Thesis*, “The Verbiverse: Creating a Verb Space with Comparative Methods of Distributional Semantics”, <https://etd.library.emory.edu/view/record/pid/emory%3Aapjw0g>
Committee: Dr. Jinho Choi (Thesis advisor), Dr. Phillip Wolff, Dr. Marjorie Pak
- Award for Excellence in the Study of Linguistics (Awarded to one senior per graduating class)
- Gretchen V and Raymond B Squires Memorial Scholarship (\$35,000)
- Phi Beta Kappa, Honors Society
- Phi Sigma Iota, International Foreign Language Honor Society
- Emory College of Arts & Science Dean’s List (6 Semesters)
- Valedictorian, William Blount H.S. class of 2011
- PSAT Commended Scholar
- Questbridge Finalist

CAMPUS AND COMMUNITY ENGAGEMENT**Emory Linguistics Circle - Founding Member**

January 2013 – May 2015

Emory NLP Research Group - Member

October 2014 – May 2015

Emory Chapter of Quest Scholars - Member

September 2011 – May 2015

Emory RUF - Member

September 2011 – May 2015

Head Start – Volunteer

May 2014 – Present

Clarkston Middle School Tutoring

January 2015 – May 2015