

SARA BLALOCK NG

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RESEARCH

Existing computational methods of language modeling rely on paradigms derived from written language data. My research interest is highlighting what linguistic information is unique to the speech signal, and how that can be used to improve computational understanding of natural language. I am a member of the Signal, Speech and Language Interpretation (SSLI) Lab in the Department of Electrical Engineering at the University of Washington. I am currently supported by US National Science Foundation, grant IIS-1617176.

Current Projects:

- Lexical features as predictors of vowel reduction
- Modeling summarizing statistics of prosody across dialogue turns
- Tacit speaker representations of sesquisyllables in English

Recent Projects:

- Transformers with prosodic cues to detect speech disfluencies in text
- Attitudinal trends in Diaspora Hoisanwa
- Digitizing of narratives in Salish languages (under departmental research assistanceship)

EDUCATION

- 2017- University of Washington
3rd-year Ph.D. student: Computational Linguistics
Advisors: Drs. Richard Wright and Mari Ostendorf
- 2013-2017 University of Utah
Honors Bachelor of Arts: Linguistics
Advisor: Dr. Abby Kaplan
Thesis: Musical Text-Setting as Evidence for Syllabification of Highly Moraic Structures in English
Bachelor of Science: Applied Mathematics
TESOL: Teaching English to Students of Other Languages Certificate

PRESENTATIONS

- 2018 *Musical Evidence for Syllabification Patterns of Highly Moraic Structures in English*
Linguistic Society of America, with Abby Kaplan and Joselyn Rodriguez
poster
- 2017 *Musical Evidence for Syllabification Patterns in English*
University of Utah Student Conference in Linguistics, with Jenica Jessen & Joselyn Rodriguez
short talk
- 2017 *Musical Evidence for Syllabification Patterns of Highly Moraic Structures in English*
Undergraduate Research Symposium, University of Utah, with Jenica Jessen
poster

TEACHING

Primary Instructorships

2020 Summer LING 473: Basics For Computational Linguistics

Teaching Assistanceships

2019 Spring CSE 472: Introduction to Computational Linguistics

2018 Fall LING 570: Shallow Processing Techniques for Natural Language Processing

2018 Spring LING 269: Swearing and Taboo Language

Graderships

2020 Winter LING 451: Phonology I

2019 Spring LING 452: Phonology II

2019 Winter LING 451: Phonology I

Curriculum Development

2019 Winter Staff assistanceship converting LING 553 (Experimental Phonetics), LING 550 (Phonetics I), and ASL Program course materials to online format

Guest Lectures

2019 25 Oct LING 550 (Phonetics I): *Reading Spectrograms*

2019 21 Aug LING 473 (Compling Basics): *Formal Grammars & Parsing*

2019 23 May LING 200 (Intro. Linguistics): *What is Computational Linguistics?*

AWARDS

2018 Travel Scholarship for Second Ethics in Natural Language Processing Workshop
North American Chapter of the ACL

2017 Top Scholar Award
University of Washington Graduate School

2017 UROP Small Grant
University of Utah Undergraduate Research Opportunities Program

2013 President's Scholarship (full-tuition)
University of Utah

SERVICE

2019-20 **President**, Linguistics Society of the University of Washington (LSUW)

2020 **Organizing Committee Member**, Northwest Linguistics Conference (NWLC)

2020 **Reviewer**, NWLC

2020 **Proctor**, North American Computational Linguistics Open Competition

2020 **Consultant**, Undergraduate senior capstone in speech translation

2018-19 **Vice President**, LSUW

2019 **Student Volunteer**, North American Chapter of the ACL

WORK EXPERIENCE

2019 Summer Intern, Computational Linguistics, Google

2016-2017 Speech Transcriber, CaptionCall

2014-2017 Mathematics Tutor

SKILLS

Computer Languages

- Python (fluent)
- R (fluent)
- HTML/CSS/JavaScript (fluent)
- Java (basic)
- Matlab (basic)

Machine Learning

- pytorch
- tensorflow
- Scikit-learn

Linguistic Tools

- Praat
- NLTK
- Kaldi

Natural Languages

- French (working)
- Spanish (basic)
- Hoisanwa Chinese (heritage)