

EMILY AHN

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Education

Wellesley College – Wellesley, MA

May 2016

Honors B.A. in Cognitive & Linguistic Sciences, concentration in Computer Science | GPA 3.70/4.0

Research Interests

Natural Language Processing, Multilinguality, Pronunciation Variation, Articulatory Phonetics, Speech Processing, Machine Translation, Linguistic Typology, Second Language Acquisition

Research Experience

SRI International, S.T.A.R. Lab – Menlo Park, CA

Aug. 2016 – Present

Research Assistant

Mentors: Dr. Wen Wang, Dr. Colleen Richey

- Support DARPA-funded Speech-to-Speech Translation technology between African French and English, specifically for medical domains
- Support NSF-funded analysis of group collaboration among middle school students via speech
- Manage data collection for Distant Speech and Elderly Speech Recognition / Cough Detection

Wellesley College Honors Thesis – Wellesley, MA

Sept. 2015 – May 2016

Senior Thesis Student

Advisor: Dr. Sravana Reddy

- Built a Foreign Accent Classification system that would identify the accent of foreign-accented English speech
- Implemented GMMs on text-independent and text-dependent speech (acquiring transcriptions via Amazon Mechanical Turk) from a corpus of 4925 telephone calls

University of Southern California (ICT) – Playa Vista, CA

Summer 2015

REU Intern

Advisor: Dr. Andrew Gordon

- Implemented rules to improve English fluency of a Natural Language Generator's narratives about animations; added these rules to existing Java code base
- Conducted crowdsourced pilot evaluations to test quality of computer-generated stories compared to human-authored stories

MIT Media Lab (Lifelong Kindergarten Group) – Cambridge, MA

Spring 2015

Undergraduate Research Assistant

Supervisor: Dr. Mitchel Resnick

- Worked on a team to test *Read Out Loud*, a mobile app for adults to learn English
- Designed an extension tool for users to review difficult vocabulary
- Used AngularJS, HTML, and CSS for front-end programming and user interface design

Teaching Experience

Wellesley College (Cognitive & Linguistic Sciences) – Wellesley, MA

Fall 2015 – Spring 2016

Linguistics Tutor

Professor: Dr. Angela Carpenter

- Conducted homework and review sessions for 40 students across two classes: Introduction to Linguistics and Phonetics & Phonology

Teaching Assistant

- Taught introductory Computer Science to 20 diverse high school girls in a seven-week intensive immersion program, hosted by Intel
- Organized curriculum for basics in Scratch, Python, JavaScript, HTML, computer graphics, data structures, and web applications

Publications and Presentations

Conference Articles

1. **Ahn, E.**, Morbini, F. and Gordon, A. (2016) *Improving Fluency in Narrative Text Generation with Grammatical Transformations and Probabilistic Parsing*. Proceedings of the 9th International Natural Language Generation Conference (INLG-2016), September 5-8, 2016, Edinburgh, Scotland.

Presentations

1. Sept. 2016. *Two Types of Foreign Accent Classification*. INTERSPEECH, Workshop for Young Female Researchers in Speech Science & Technology at San Francisco, CA. **(Poster)**
2. April 2016. *A Computational Approach to Foreign Accent Classification*. Ruhlman Conference, Wellesley College at Wellesley, MA. **(Oral)**
3. April 2016. *Foreign Accent Classification*. Great Lakes Expo for Experimental and Formal Undergraduate Linguistics, Michigan State University at East Lansing, MI. **(Oral)**
4. April 2016. *Fluency Transformations in Storytelling*. Great Lakes Expo for Experimental and Formal Undergraduate Linguistics, Michigan State University at East Lansing, MI. **(Poster)**
5. Oct. 2015. *Fluency Transformations in Storytelling*. Research Experiences for Undergraduates Symposium, NSF at Arlington, VA. **(Poster)**

Grants

1. **Travel Grant** to present and attend the Workshop for Young Female Researchers in Speech Science & Technology (Sept. 2016) at INTERSPEECH. Funded by NSF, Microsoft, Google.
2. **Travel Grants** to present at GLEEFUL conference (April 2016) at MSU. Awarded by Michigan State University and Wellesley College Department of Computer Science.
3. **Travel Grant** to present at NSF REU Symposium (Oct. 2015) at NSF. Awarded by Wellesley College Office of the Provost and Dean of the College.
4. **Travel Grant** to attend Explore Graduate Studies in Computer Science and Engineering (Oct. 2015) at University of Michigan. Awarded by NSF.

Languages

Computer: Python, Java, UNIX, XML, JavaScript, HTML/CSS

Human: Korean (fluent), Spanish & Mandarin (proficient), Russian & Arabic (beginner)

Relevant Coursework

Graduate: Cognitive Science [9.012 at MIT]

Undergraduate: Natural Language Processing [CS 349], Artificial Intelligence [CS 232], Languages and Automata [CS 235], Data Structures [CS 230], Theory of Programming Languages [CS 251]

Extracurriculars

Varsity Rowing (rowed 4 years for Wellesley College team; won 1st place at DIII NCAA Championships in 2016), Taekwondo (2nd degree black belt; won gold at U.S. Nationals in 2009)