

Eric Morley

Oregon Health & Science University
Center for Spoken Language Understanding

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Education

Ph.D. in Computer Science and Engineering, Oregon Health & Science University, expected 2015.

Thesis: Automating Language Sample Analysis

Committee: Brian Roark (Adviser), Jan van Santen, Kyle Gorman, Joel Tetreault

Overall GPA: 3.97/4.0

Visiting Scholar, University of Michigan, October 2012 - August 2013.

Advisers: Dragomir Radev, Samuel Gross

B.A. with Honors in Linguistics, University of Chicago, 2007.

Senior Thesis: Stress Assignment and Suffix Ordering in Washo

Adviser: Alan C. L. Yu

Overall GPA: 3.67/4.0, GPA in major: 3.96/4.0

Academic Honors

Graduate Fellowship Honorable Mention

National Science Foundation, 2011

Dean's List

The University of Chicago, 2003 – 2007

Advanced Russian Proficiency Certificate: High Pass

The University of Chicago, 2006

Foreign Language Acquisition Grant

The University of Chicago, 2005

For the study of Russian at Far Eastern National University, Vladivostok, Russia.

Research Experience

Graduate Research Assistant

PI: Jan van Santen

January 2012 – Present

NIH Grant R01-DC012033

Automating annotations of disfluencies and grammatical errors in language elicited from children with autism spectrum disorder, specific language impairment, and children who are typically developing.

Graduate Research Assistant

PI: Alexander Kain, Co-PIs: Esther Klabbers, Jan van Santen

March 2010 – December 2011

NSF Grant 0964468

Developed a system to automatically estimate speaker-specific intonation parameters and synthesize speaker-specific F_0 contours for speech synthesis. Built and evaluated an automatic pitch-accent detector, oversaw annotation of data by a team of labelers, and performed statistical analyses.

Graduate Research Assistant

PI: Jan van Santen

September 2009 – March 2010

NIH Grant 1R01DC007129-01

Trained the CSLU toolkit speech recognizer to identify clearly spoken utterances in children's speech.

Undergraduate Research Assistant
PI: Alan C. L. Yu

September 2005 – June 2007
The Washo Project

Translated and annotated texts in Washo, updated the project's web page, conducted independent research in phonology, and assisted in compiling a dictionary of Washo.

Teaching Experience

English Teacher

September 2007- September 2009

Taught English in the equivalent of grades 7, 8, 10 and 11, CEG Klouekanme, Benin.

Finnish Teacher

Summer 2006

Taught Finnish (intermediate level for one year of high-school credit) at Concordia Language Villages, Bemidji, MN.

Professional Experience

RedOwl Analytics
Senior Data Scientist

New York, NY
March 2015 — Present

Ernst & Young
Senior in Forensic Technology and Discovery Services

Detroit, MI
July 2012 — February 2015

Developed various natural language processing tools, including language identification, document classification, and fuzzy matching systems. Developed clustering algorithm to find all groups of potential conspirators meeting various criteria in a fraud investigation. Assisted in investigations involving large sets of noisy data including: call center logs, instant messages, scanned contracts, and wire transactions.

Nuance Communications
Text-to-Speech Software Engineer

Sunnyvale, CA
June 2011 — September 2012

Developed two expressive voices for speech synthesis by: implementing sentence-selection algorithms and developing a corpus of recordings for speech synthesis, designing phonetic data conversion system from in-house proprietary file format to public format to facilitate phonetic labeling and segmentation outsourcing, and overseeing an external team of labelers.

United States Peace Corps
Teaching English as a Foreign Language (TEFL) Volunteer

Klouekanme, Benin
July 2007 — September 2009

Primary Project: English teacher at a public secondary school.

Secondary Projects: documented the local language (Ajagbe), organized and supervised an English club at school, revised Peace Corps' language training materials, taught computer skills (typing, Microsoft Word and Excel) to adults.

Residential Computing at the University of Chicago
Dispatch Computing Assistant

Chicago, IL
September 2004 — June 2005

Solved students' software and hardware problems, maintained printing kiosks and lab computers.

Publications and Presentations

Books

1. A Grammar of Ajagbe, *Lincom Europa*, 2010.

Conference Proceedings

1. Emily Prud'hommeaux, Eric Morley, Masoud Rouhizadeh, Laura Silverman, Jan van Santen, Sarah Kauper, and Rachel DeLaHunta. Computational Analysis of Trajectories of Linguistic Development in Autism. In *Proceedings of the IEEE Spoken Language Technology Workshop*. December 2014. (Poster)
2. Eric Morley, Anna Eva Hallin, and Brian Roark. Data Driven Grammatical Error Detection in Transcripts of Children's Speech. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing*. October 2014. (Poster)
3. Eric Morley, Anna Eva Hallin, and Brian Roark. Challenges in Automating Maze Detection. In *Proceedings of the ACL-HLT 2014 1st Workshop on Computational Linguistics and Clinical Psychology*, Baltimore, Maryland. June 2014. (Poster)
4. Eric Morley, Brian Roark, and Jan van Santen. The Utility of Manual and Automatic Linguistic Error Codes for Identifying Neurodevelopmental Disorders. *Proceedings of the NAACL-HLT 2013 8th Workshop on Innovative Use of NLP for Building Educational Applications*. June 2013. (Talk)
5. Amjad Abu-Jbara, Rahul Jha, Eric Morley, and Dragomir Radev. Experimental Results on the Native Language Identification Shared Task. *Proceedings of the NAACL-HLT 2013 8th Workshop on Innovative Use of NLP for Building Educational Applications*. June 2013. (Poster)
6. Eric Morley and Emily Prud'hommeaux. Using Constituency and Dependency Parse Features to Identify Errorful Words in Disordered Language. *Workshop on Child, Computer and Interaction*. September 2012. (Poster)
7. Eric Morley, Esther Klabbbers, Jan van Santen, Alexander Kain, and Seyed Hamidreza Mohammadi. Synthetic F_0 Can Effectively Convey Speaker ID in Delexicalized Speech. In *INTERSPEECH-2012*. September 2012. (Poster)
8. Eric Morley, Jan van Santen, Esther Klabbbers, and Alexander Kain. F_0 Range and Peak Alignment across Speakers and Emotions. In *Proceedings of the 2011 International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. May 2011. (Poster)

Unpublished Conference Presentations

1. Eric Morley. Simulating Errors Typical of Disordered Language. *The Pacific Northwest Regional NLP Workshop*. May 2012. (Poster)
2. Eric Morley. Stress Assignment and Suffix Ordering in Washo. *Workshop on American Indigenous Languages*. May 2007. (Talk)

Other Professional Activities

Reviewer for Computational Linguistics and Clinical Psychology Workshop, 2015

Patents

Pending

1. "System and Method for Automatically Classifying Documents" (with Richard Oehrle, Eric Johnson, Arpit Bothra, Jason Brenier, and Anna Cueni), filed March 15, 2013.

Additional Skills

Languages spoken (in decreasing order of proficiency): English (native), French, Finnish, Russian, Ajagbe, German

Programming languages and software packages: Python, Java, C, Bash, MATLAB, L^AT_EX, OpenFST, Thrax, Adobe Flash, Amazon Mechanical Turk

Last updated: March 2, 2015