Timothy F. Weale

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Research Interests

Artificial intelligence, including computational linguistics and knowledge-enhanced, large-scale text mining and categorization. Additional research into dialogue agent development and multi-modal recording techniques.

Education

The Ohio State University, Columbus, Ohio USA
Ph.D., Computer Science and Engineering (expected graduation date: August 2010)
M.S., Computer Science and Engineering, December 2009

- Thesis Topic: Word Relatedness Measures
- Advisors: Dr. Eric Fosler-Lussier and Dr. Chris Brew
- Areas of Study: Artificial Intelligence, Linguistics, Data Mining

University of Dayton, Dayton, Ohio USA
B.S., Computer Science, May 2003

- *Summa Cum Laude* distinction, University Honors Program

Research Experience

Speech and Language Technologies (SLATE) Research Lab **06.2004 – present**

- Investigations into word relatedness measures using overlapping Wikipedia datasets
- Software agent development. Includes work on the agent embodiment environment and interpretation module for the dialogue system.
- Investigations into multi-modal dialogue collection.
- Full-time funding: 06.2004 – 04.2005; 06.2005 – 09.2005; 06.2008 – 09.2008

SLATE NSF Grant **09.2007 – 06.2008**

- "Establishing and Breaking Conceptual Pacts with Dialog Partners"
- Development of experimental presentation software and coordination of stem item creation and norming
- NSF Grant #0713364; Granted to Donna K. Byron and Joy Hanna

OSU Department of Psychology **06.2007 – 09.2007**

- Software development on the Buckeye Speech Corpus Searcher
- Additional support and documentation

OSU Center for Cognitive Science **06.2006 – 09.2006**

- Development of task for the collection of spatial reference strategies.
- Collection and analysis of the resulting data (CONCERT 2006 corpus).
- Management of three undergraduate annotators.

Teaching Experience

Instructor, CSE 630: Artificial Intelligence I
. **WI10, SP07**

- Delivered in-class lectures and held office hours.
- Created course homework assignments and exams.
- Oversaw student grader/TA.

Instructor, CSE 201: Elementary Computer Programming
. **FA09, WI09, FA08, WI07, FA06**
. **SP06, WI 06, FA05, SP04, WI04, FA03**

- Organized and delivered course lectures, labs and website.
- Responsible for holding office hours and grading student work.
- Coordinated with other sections for unified assignments and exams.
- Instructor of record for the course.

Grader, CSE 630 (Fosler) and CSE 732: Computational Linguistics (Brew)
. **SP09**
Grader, CSE 201 (Bucci) and CSE 732: Computational Linguistics (Byron)
. **SP05**

- Graded lab work, homework and tests (when appropriate) for two classes.
- Responsible for holding office hours for student assistance.

Conference Proceedings

Donna K. Byron, Aakash Dalwani, Ryan Gerritsen, Mark Keck, Thomas Mampilly, Vinay Sharma, Laura Stoia, Timothy Weale and Tianfang Xu. Natural Noun Phrase Variation for Interactive Characters. *Proceedings of the First Annual Artificial Intelligence and Interactive Digital Entertainment Conference.* 15-20. Marina del Rey, California, June 2005. AAAI.

Timothy Weale, Jennifer Seitzer and Damon Sink. POINTER: An Aid To Musical Counterpoint Composition. *Proceedings of the Fourteenth Midwest Artificial Intelligence and Cognitive Science Conference (MAICS'2003).* 147–150. University of Cincinnati, Cincinnati, Ohio. April 12-13, 2003.

Workshop Proceedings

Timothy Weale, Chris Brew and Eric Fosler-Lussier. Using the Wiktionary Graph Structure for Synonym Detection. *Proceedings of the 2009 ACL-IJCNLP Workshop on Collaboratively Constructed Semantic Resources.*

Timothy Weale. Spatial Reference Resolution for an Embodied Dialogue Agent. *Proceedings of the 2007 AAAI Doctoral Consortium.*

Timothy Weale and Jennifer Seitzer. EVOC: Generating Counterpoint using Genetic Algorithms. *Proceedings of the Undergraduate Student Workshop at the (International) Genetic and Evolutionary Computation Conference (GECCO-2003).* 242–245. Chicago, Illinois. July 12, 2003.

Conference Posters

Timothy Weale and Jennifer Seitzer. EVOC: A Music Generating System using Genetic Algorithms. *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI'03).* 1383–1384. Acapulco, Mexico, August 2003.

Invited Talks

"Measuring Word Relatedness". University of Dayton Computer Science Research Colloquium Series. March 28, 2008.

Technical Reports

Timothy Weale. Development Environment for Extracting Relatedness from Wiki-based Graph Structures. The Ohio State University. 2009. *in preparation.*

Timothy Weale. SLATE Lab Information Retrieval Environment. The Ohio State University. 2009. *in preparation.*

Timothy Weale. Utilizing Wikipedia Categories for Document Classification. The Ohio

State University. 2007. *OSU-CISRC-4/08-TR14*.

Timothy Weale, Brad Mellen and Donna K. Byron. Modifying the Quake II Engine for 'Civilian' Use. The Ohio State University. 2005. *OSU-CISRC-11/05-TR74*.

Local Presentations

"Dialogue System for Spatial Reference Understanding". Research Talk. The Ohio State University Center for Cognitive Science. February 1, 2007.

"Evolutionary Counterpoint". Poster. *Stander Symposium for Undergraduate Research*. University of Dayton, Dayton, Ohio. March 4-5, 2003.

Professional Service

Scientific Advisory Committee. Young Researchers' Roundtable on Spoken Dialog Systems. 2009.

Local Coordinator. Young Researchers' Roundtable on Spoken Dialog Systems. 2008.

Student Volunteer. 46^{th} Annual Meeting of the Association for Computational Linguistics: Human Language Technology Conference. 2008.

Review Committee. HLT/EMNLP Interactive Demo Sessions. 2005.

Academic Service

Graduate Studies Committee. Graduate Representative. Computer Science and Engineering Department. 09.2007 – 09.2008.

Graduate Admissions Committee. Graduate Representative. Computer Science and Engineering Department. 09.2006 – 09.2007.

Council of Graduate Students. Graduate Delegate. Computer Science and Engineering. The Ohio State University. 09.2005 – 09.2006.

Fund for Educational Development Committee. Student Representative. University of Dayton. 2000 – 2003.

Honors Advisory Committee. Junior Class Representative. University of Dayton. 2001 – 2002.

Professional Affiliations

Association for the Advancement of Artificial Intelligence
Association for Computational Linguistics

Honors

Lawrence A Jehn Alumni Award of Excellence in the Senior Class. Computer Science Department, University of Dayton. May 2003.

Citation for Outstanding Research. 2003 Stander Symposium for Undergraduate Research.

Honorable Mention. 2003 National Science Foundation Graduate Research Fellowship Competition.