

Michael Joseph Heilman

Language Technologies Institute, Carnegie Mellon University

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Current Position: PhD. Student

Education

Carnegie Mellon University, Pittsburgh, Pennsylvania

- Pursuing PhD. in Language Technologies, aiming to graduate in 2010
- Advisor: Noah Smith

Carnegie Mellon University, Pittsburgh, Pennsylvania

- Masters in Language Technologies, 2007
- Cumulative GPA: 3.97
- Advisor: Maxine Eskenazi

University of Notre Dame, Notre Dame, Indiana

- Bachelor of Science, Computer Science, with Honors, 2005
- Bachelor of Arts in Japanese Language, with Honors, 2005
- Graduated a year early from a five-year program.
- Cumulative GPA: 3.63

Fellowships, Grants, Awards, and Honors

- National Science Foundation Travel Grant (\$1,000) for participating in the Young Researcher's Track at the Ninth International Conference on Intelligent Tutoring Systems, Montreal, Quebec, Canada, 2008.
- National Science Foundation Graduate Research Fellowship, 2007.
- Program in Interdisciplinary Education Research (<http://www.cmu.edu/pier>), 2007.
- Siebel Scholar (<http://www.siebelscholars.com>), 2007.
- Inducted into Tau Beta Pi, University of Notre Dame, 2005.
- Inducted into Upsilon Pi Epsilon, University of Notre Dame, 2005.
- Summer Language Grant (\$4,500) to study in Japan, University of Notre Dame, 2002.

Professional Activities

- Student Organizer, Program for Interdisciplinary Education Research 2008-2009 Speaker Series
- Reviewer, First Annual Conference on Educational Data Mining, 2008.
- Scientific Program Committee, Speech and Language Technology in Education (SLaTE), International Speech Communication Association Tutorial and Research Workshop, 2007.
- Organizing Committee, Speech and Language Technology in Education (SLaTE), ISCA Tutorial and Research Workshop, 2007.

- Mentor to Christine Feeney for Pittsburgh Science of Learning Center Summer Internship program, 2007.
- Co-organizer and presenter, CMU, Pitt, Pittsburgh Company Demo Session, Ninth International Conference on Spoken Language Processing, 2006.

Teaching Experiences

Teaching Assistant, Natural Language Processing (11-411), Spring 2008

- Assisted Noah Smith with this undergraduate course at CMU.
- Presented 3 lectures on text classification, lexical semantics, and discourse processing.
- Co-developed final project on question generation and answering.

Other Educational Experiences

Research Experience for Undergraduates, University of Notre Dame, 2005

- Worked on natural language understanding components of social robot under Dr. Matthias Scheutz.
- The robot was presented at the AAAI 2005 Robot Competition.

Research Experience for Undergraduates, University of Notre Dame, Summer 2004

- Part of SPANIDS project team under Dr. Lambert Schaelicke.
- Designed and programmed hardware modules in Verilog.

Princeton in Ishikawa, Kanazawa, Japan, Summer 2003

- Participated in eight-week home-stay and intensive language training program.

Hokkaido International Foundation, Hakodate, Japan, Summer 2002

- Participated in eight-week home-stay and intensive language training program.

University of Notre Dame London Program, London, England, Fall 2003

- Semester program, fulfilled Computer Science and university course requirements.
- Gained global perspective living and studying in diverse Greater London.

Full-Length Publications in Conference and Workshop Proceedings

Heilman, M., Eskenazi, M. (2008). Self-Assessment in Vocabulary Tutoring. Young Researcher's Track. Ninth International Conference on Intelligent Tutoring Systems.

Heilman, M., Collins-Thompson, K., Callan, J., and Eskenazi, M. (2007). Combining Lexical and Grammatical Features to Improve Readability Measures for First and Second Language Texts. *Proceedings of the Human Language Technology Conference*. Rochester, NY.

Heilman, M., Collins-Thompson, K., Callan, J., & Eskenazi, M. (2006). Classroom success of an Intelligent Tutoring System for lexical practice and reading comprehension. *Proceedings of the Ninth International Conference on Spoken Language Processing*. Pittsburgh, U.S.A.

Eberhard, K. M., Scheutz, M., & Heilman, M. (2005). An empirical and computational test of linguistic relativity. In B. B. Bara, L. Barsalou, & M. Buccarello (Eds.), *Proceedings of the 27th Annual Cognitive Science Society Conference* (pp. 618-623). Stresa, Italy. Mahweh, N.J.: Lawrence Erlbaum Associates, Inc.

Publications in Refereed Workshop and Student Track Proceedings

Heilman, M., Eskenazi, M. (2008). Self-Assessment in Vocabulary Tutoring. Young Researcher's

- Track. Ninth International Conference on Intelligent Tutoring Systems.
- Feeney, C., Heilman, M. (2008). Automatically Generating and Validating Reading-Check Questions. Young Researcher's Track. Ninth International Conference on Intelligent Tutoring Systems.
- Pino, J., Heilman, M. and Eskenazi, M. (2008) A Selection Strategy to Improve Cloze Question Quality. Proceedings of the Workshop of Intelligent Tutoring Systems for Ill-Defined Domains. 9th International Conference on Intelligent Tutoring Systems.
- Heilman, M., Collins-Thompson, K., and Eskenazi, M. (2008). An Analysis of Statistical Models and Features for Reading Difficulty Prediction. The 3rd Workshop on Innovative Use of NLP for Building Educational Applications. Association for Computational Linguistics.
- Heilman, M., Zhao, L., Pino, J., and Eskenazi, M. (2008) Retrieval of Reading Materials for Vocabulary and Reading Practice. The 3rd Workshop on Innovative Use of NLP for Building Educational Applications. Association for Computational Linguistics.
- Heilman, M. & Eskenazi, M. (2007). Application of Automatic Thesaurus Extraction for Computer Generation of Vocabulary Questions. *Proceedings of the SLATE Workshop on Speech and Language Technology in Education*.
- Heilman, M. and Eskenazi, M. (2006). Language Learning: Challenges for Intelligent Tutoring Systems. *Proceedings of the Workshop of Intelligent Tutoring Systems for Ill-Defined Domains. 8th International Conference on Intelligent Tutoring Systems*.

Refereed Short Publications and Posters

- Smith, N., Heilman, M., and Hwa, R. (2008). Question Generation as a Competitive Undergraduate Course Project. Workshop on the Question Generation Shared Task and Evaluation Challenge. Arlington, VA. (3-page paper).
- Heilman, M., Juffs, A., & Eskenazi, M. (2007). Choosing Reading Passages for Vocabulary Learning by Topic to Increase Intrinsic Motivation. *Proceedings of the 13th International Conference on Artificial Intelligence in Education*. Marina del Rey, CA. (poster)

Posters and Presentations

- Heilman, M. & Eskenazi, M. (2006). Authentic, Individualized Practice for English as a Second Language Vocabulary. Presented at Interfaces of Intelligent Computer-Assisted Language Learning Workshop at the Ohio State University, Columbus, OH, 12/06. Unpublished.
- Juffs, A., Eskenazi, M., Callan, J., Wilson, L., Heilman, M., Collins-Thompson, K and Pelletreau, T. Promoting robust learning of vocabulary through computer assisted language learning. June, 2006, AAAL Montreal.
- Juffs, A., Wilson, L., M. Eskenazi, M., Callan, J., Brown, J., Collins-Thompson, K., Heilman, M., Pelletreau, T. and Sanders, J. (2006). Robust learning of vocabulary: investigating the relationship between learner behaviour and the acquisition of vocabulary (poster). At The 40th Annual TESOL Convention and Exhibit (TESOL 2006).