

Mary Elaine Califf

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Education

Ph.D. in Computer Sciences, University of Texas at Austin, 8/98. Dissertation: "Relational Learning Techniques for Natural Language Information Extraction."

M.S. in Computer Science, Baylor University, 1993.

M.A. in English, Baylor University, 1989.

B.A. in English, Baylor University, 1985.

Research Interests

Artificial Intelligence, particularly Machine Learning and Natural Language Processing
Computer Science Education

Professional Experience

08/98-present Assistant/Associate Professor
School of Information Technology, Illinois State University

Summer 1998 and Summer 1997
Graduate Research Assistant
Dept. of Computer Sciences, The University of Texas at Austin

Worked with my dissertation advisor, Raymond Mooney, on research in the areas of machine learning and natural language processing.

09/94-05/95 Graduate Teaching Assistant
Dept. of Computer Sciences, The University of Texas at Austin

In the fall, taught two discussion sections for the beginning programming course (taught in Pascal). In the spring, I was teaching assistant for an honors seminar on women in science, team-taught by members of three departments, include computer sciences.

09/92-5/93 Graduate Assistant
Center for Computing and Information Systems, Baylor University

Continued duties of previous position.

02/90-08/92

Programmer
Center for Computing and Information Systems, Baylor University

Worked in the administrative computing section. Primary task was the development of Macintosh programs to provide appropriate interfaces to administrative data for academic personnel. Also taught several classes on object-oriented programming, C++, and GUI programming for colleagues in the center. Duties also included other administrative programming as needed.

09/89-12/89

Graduate Teaching Assistant
Dept. of Engineering and Computer Science, Baylor University

Taught lab for the computer course for education majors.

06/88-08/89

Part-time Library Assistant
Armstrong-Browning Library, Baylor University

Helped run the main floor of the Armstrong-Browning Library: training and supervising student workers, giving tours, developing training documents, creating brochures, and filling in for the librarian as needed.

01/88-05/88

Graduate Assistant
English Department, Baylor University

Developed software for use in the Writing Center.

09/86-12/87

Graduate Teaching Assistant
English Department, Baylor University

Taught two sections per semester of freshman composition courses.

09/85-05/86

Graduate Research Assistant
English Department, Baylor University

Worked as a research assistant for one of the English professors, primarily helping with his comprehensive bibliography of Byron materials.

Professional Societies

American Association for Artificial Intelligence
Association for Computational Linguistics
Association for Computing Machinery
IEEE Computer Society

Publications/Presentations

1. Alberto Lavelli, Mary Elaine Califf, Fabio Ciravegna, Dayne Freitag, Claudio Guiliano, Nicholas Kushmerick, Lorenza Romano, and Neil Ireson. (2009) Evaluation of Machine Learning-based Information Extraction Algorithms:

Criticisms and recommendations. *Language Resources and Evaluation*.

2. Califf, Mary Elaine. (2008) Combining Rules and Naïve Bayes for Disease Classification. In Proceedings of the Second i2b2 Workshop on Challenges in Natural Language Processing for Clinical Data. AMIA 2008. Washington, DC.
3. Califf, Mary Elaine, Mary Goodwin and Jake Brownell. Helping him see: Guiding a visually impaired student through the computer science curriculum. *Proceedings of the 39th SIGCSE Technical Symposium on Computer Science Education*. Portland, OR, Mar 12-15, 2008.
4. Goodwin, Mary and Mary Elaine Califf. An assessment of the impact of time management training on success in a time-intensive course. *Journal on Excellence in College Teaching*. 17(2). 2007.
5. Ireson, Neil, Fabio Ciravegna, Mary Elaine Califf, Dayne Freitag, Nick Kushmerick, and Aberto Lavelli. Evaluating machine learning for information extraction. *Proceedings of the 22nd International Conference on Machine Learning (ICML 2005)*. Bonn, Germany, Aug 7-11, 2005.
6. Califf, Mary Elaine and Mary Goodwin. Effective incorporation of ethics into courses that focus on programming. *Proceedings of the 36th SIGCSE Technical Symposium on Computer Science Education*. St. Louis, MO, Feb 23-27, 2005.
7. Goodwin, Mary and Mary Elaine Califf. Preliminary findings on the significance of learning styles over time. Presented to the International Society for the Scholarship of Teaching and Learning Inaugural Meeting. Bloomington, Indiana. October, 2004.
8. Alberto Lavelli, Mary Elaine Califf, Fabio Ciravegna, Dayne Freitag, Claudio Giuliano, Nick Kushmerick, and Lorenza Romano. IE evaluation: Criticisms and recommendations. In *Proceedings of the AAAI-04 Workshop on Adaptive Text Extraction and Mining (ATEM-2004)*, San Jose, California, July, 2004.
9. Alberto Lavelli, Mary Elaine Califf, Fabio Ciravegna, Dayne Freitag, Claudio Giuliano, Nicholas Kushmerick, and Lorenza Romano. A Critical Survey of the Methodology for IE Evaluation. In *Proceedings of the 4th International Conference on Language Resources and Evaluation*, Lisbon, Portugal, May, 2004.
10. Mary Elaine Califf and Raymond J. Mooney. Bottom-Up Relational Learning of Pattern Matching Rules for Information Extraction. *Journal of Machine Learning Research*, 4(2003): 177-210.
11. Mary Elaine Califf. Efficient and Effective Induction of First Order Decision Lists. In *Proceedings of the Thirteenth International Conference on Inductive Logic Programming*. Sydney, Australia, July, 2002.

12. Mary Elaine Califf and Mary Goodwin. "Testing Skills and Knowledge: Introducing a Laboratory Exam in CS1. In *Proceedings of the 33rd SIGCSE Technical Symposium on Computer Science Education*. Covington, Kentucky, pp. 217-221, March 2002.
13. Cynthia A. Thompson and Mary Elaine Califf. Improving Learning by Choosing Examples Intelligently in Two Natural Language Tasks. In *Learning Language in Logic*, J. Cussens and S. Džeroski(Eds), pp. 279-299, Springer, Berlin, 2000.
14. Cynthia A. Thompson, Mary Elaine Califf and Raymond J. Mooney. Active Learning for Natural Language Parsing and Information Extraction. In *Proceedings of the Sixteenth International Conference on Machine Learning (ICML99)*. Bled, Slovenia, pp. 406-414, June 1999.
15. Mary Elaine Califf and Raymond J. Mooney. Relational Learning of Pattern-Match Rules for Information Extraction. In *Proceedings of the Sixteenth National Conference on Artificial Intelligence (AAAI99)*. Orlando, Florida, pp. 328-334, July 1999.
16. Mary Elaine Califf and Raymond J. Mooney. Advantages of Decision Lists and Implicit Negatives in Inductive Logic Programming. *New Generation Computing*, 16 (1998): 263-281.
17. Mary Elaine Califf and Raymond J. Mooney. Applying ILP-based Techniques to Natural Language Information Extraction: An Experiment in Relational Learning. In *Working Notes of the IJCAI-97 Workshop on Frontiers of Inductive Logic Programming*. Nagoya, Japan, August, 1997.
18. Mary Elaine Califf and Raymond J. Mooney. Relational Learning of Pattern-Match Rules for Information Extraction. In *Working Papers of the ACL-97 Workshop in Natural Language Learning*. Madrid, Spain, July, 1997.
19. Mary Elaine Califf and Raymond J. Mooney. Learning the Past Tense of English Verbs Using Inductive Logic Programming. In *Connectionist, Statistical, and Symbolic Approaches to Learning for Natural Language Processing*, S. Wermter, E. Riloff, and G. Scheler (Eds.), pp. 370-384, Springer, Berlin, 1996.
20. Raymond J. Mooney and Mary Elaine Califf. Induction of First-Order Decision Lists: Results on Learning the Past Tense of English Verbs. *Journal of Artificial Intelligence Research*, 3 (1995): 1-23.
21. John M. Zelle, Cynthia A. Thompson, Mary Elaine Califf and Raymond J. Mooney. Inducing Logic Programs without Explicit Negative Examples. In *Proceedings of the Fifth International Inductive Logic Programming Workshop*. Leuven, Belgium, September, 1995.
22. Mary Elaine Califf. An Exploration of Similarity Based Learning as an Aid to Network Monitoring. Master's Thesis, Baylor University, 1993.
23. Mary Elaine Califf. No Mere Farce: Aspects of Shakespearean Romantic Comedy in *The Merry Wives of Windsor*. Master's Thesis, Baylor University, 1989.

24. Mary Elaine Califf. Confronting the Shadow: Individuation in 'The Piazza'. Presented at the Conference of College Teachers of English, 1988.
25. Mary Elaine Califf. Appearance and Reality in Phillip Massinger's *The City Madam*. Presented at the South Central Renaissance Conference, 1987.

Grants Funded

"Collaborative Research: ITWF: Building Communities: Recruiting and Retention of Underrepresented Groups in Computer Science" A grant to encourage recruitment and retention of women and underrepresented minorities in computing disciplines. It is a linked grant with several schools involved, with the University of Illinois at Urbana-Champaign as the lead institution. The grant has been funded for 4 years by NSF, beginning August, 2004. I am the PI at Illinois State University. The total amount for Illinois State's grant is \$86,057.

University Courses Taught

Undergraduate

Problem Solving Using the Computer (CS1)
Introduction to Data Structures
Algorithms and Data Structures
Concepts of Programming Languages
Artificial Intelligence
Data Mining
Foundations of Inquiry (freshman seminar)

Graduate

Artificial Intelligence and Expert Systems

Thesis Supervision

Mary Goodwin, An Investigation in the Effect of Time Management Training on the Success Rate in Beginning Programming Courses, 2004.

Vajesh Durbal, An Application of Inductive Logic Programming Techniques to Data Mining, 2004.