

## Douglas C Downey

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Research Interests	Natural Language Processing, Machine Learning, Artificial Intelligence	
Education	<b>University of Washington</b> Ph.D. Computer Science and Engineering, 2008 Dissertation Title: <i>Redundancy in Web-scale Information Extraction: Probabilistic Model and Experimental Results</i> M.S. Computer Science and Engineering, 2004	September 2002 – December 2008
	<b>Case Western Reserve University</b> B.S./M.S. in Computer Science Minors in Mathematics and Economics	August 1996 – May 2000
Professional Experience	<b>Northwestern University</b> , Assistant Professor Department of Electrical Engineering and Computer Science	September 2008 – present
	<b>University of Washington</b> , Research Assistant <i>Advisor: Oren Etzioni</i>	June 2003 – September 2008
	<b>Microsoft Corporation</b> , Research Intern <i>Mentor: Susan Dumais    Manager: Eric Horvitz</i>	March 2006 – July 2006
	<b>Intel Corporation</b> , Internet Software Engineer	October 2000 – September 2002
	<b>Case Western Reserve University</b> , Research Assistant <i>Advisor: Randall D. Beer</i>	October 1998 – September 2000
Awards	Microsoft Research Fellowship, sponsored by Microsoft Live Labs, 2006 IJCAI Distinguished Paper Award, 2005 NSF Graduate Fellowship, 2001 NDSEG Graduate Fellowship (awarded), 2001 United States Presidential Scholar, 1996	
Teaching Experience	<b>Northwestern University</b> , Assistant Professor Machine Learning (EECS 349), Fall 2008 Web Information Retrieval and Extraction (EECS 395/495), Spring 2009	

Professional  
Service

Program Committees:  
IJCAI, 2009-2010  
ICML, 2010  
Reviewer for:  
NSF Division of Information and Intelligent Systems, 2009  
VLDB Journal, 2009  
HLT/NAACL, 2009  
AI Journal, 2008  
Journal of Artificial Intelligence Research, 2008-2009  
User Modeling Conference, 2007  
Data Mining and Knowledge Discovery Journal, 2007  
AAAI Conference, 2005  
ACM Transactions on Internet Technology, 2004

University  
Service

McCormick School of Engineering Freshman Advisor, 2008-2010  
EECS Undergraduate Curriculum Committee, 2009

Publications

1. Doug Downey, Arun Ahuja, Mike Anderson. Learning to Integrate Relational Databases with Wikipedia. *Proceedings of the IJCAI-09 Workshop on User-Contributed Knowledge and Artificial Intelligence (WIKIAI)*, 2009.
2. Doug Downey, Oren Etzioni. Look Ma, No Hands: Analyzing the Monotonic Feature Abstraction for Text Classification. In D. Koller, Y. Bengio, D. Schuurmans and L. Bottou (Eds.), *Advances in Neural Information Processing Systems (NIPS) 21*, 2008.
3. Doug Downey, Susan Dumais, Dan Liebling and Eric Horvitz. Understanding the relationship between searchers' queries and information goals. *Proceedings of the 17<sup>th</sup> Conference on Information and Knowledge Management (CIKM)*, 2008
4. Alan Ritter, Doug Downey, Stephen Soderland, and Oren Etzioni. It's a Contradiction -- No, It's Not: A Case Study using Functional Relations. *Proceedings of the 2008 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2008
5. Doug Downey, Stefan Schoenmackers, Oren Etzioni. Sparse Information Extraction: Unsupervised Language Models to the Rescue. *Proceedings of the 45<sup>th</sup> Annual Meeting of the Association of Computational Linguistics (ACL)*, 2007.
6. Doug Downey, Matthew Broadhead, Oren Etzioni. Locating Complex Named Entities in Web Text. *Proceedings of the Twentieth International Joint Conference on Artificial Intelligence (IJCAI)*, 2007.
7. Doug Downey, Susan Dumais, Eric Horvitz. Models of Searching and Browsing: Languages, Studies, and Applications. *Proceedings of the Twentieth International Joint Conference on Artificial Intelligence (IJCAI)*, 2007.
8. Doug Downey, Susan Dumais, and Eric Horvitz. Heads and Tails: Studies of Web Search with Common and Rare Queries. *Proceedings of the 30th Annual International ACM Conference on Research and Development in Information Retrieval (SIGIR)*, 2007.
9. Doug Downey, Oren Etzioni, and Stephen Soderland. A Probabilistic Model of Redundancy in Information Extraction. *Proceedings of the Nineteenth International Joint Conference on Artificial Intelligence (IJCAI)*, 2005. **Distinguished Paper Award.**

10. Michael J. Cafarella, Doug Downey, Oren Etzioni, Stephen Soderland. KnowItNow: Fast, Scalable Information Extraction from the Web. *Proceedings of the 2005 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2005.
11. Oren Etzioni, Michael Cafarella, Doug Downey, Ana-Maria Popescu, Tal Shaked, Stephen Soderland, Daniel S. Weld, and Alexander Yates. Unsupervised Named-Entity Extraction from the Web: An Experimental Study. *Artificial Intelligence* 165:91-134, 2005.
12. Doug Downey, Oren Etzioni, Daniel S. Weld, and Stephen Soderland. Learning Text Patterns for Web Information Extraction and Assessment. *Proceedings of the AAAI-04 Workshop on Adaptive Text Extraction and Mining*, 2004.
13. Oren Etzioni, Michael Cafarella, Doug Downey, Ana-Maria Popescu, Tal Shaked, Stephen Soderland, Daniel S. Weld, and Alexander Yates. Methods for Domain-Independent Information Extraction from the Web: An Experimental Comparison. *Proceedings of the Nineteenth National Conference on Artificial Intelligence (AAAI)*, 2004.
14. Oren Etzioni, Michael Cafarella, Doug Downey, Stanley Kok, Ana-Maria Popescu, Tal Shaked, Stephen Soderland, Daniel S. Weld, and Alexander Yates. Web-scale Information Extraction in KnowItAll. *Proceedings of the Thirteenth International World Wide Web Conference (WWW)*, 2004.
15. Andrew C. Slocum, Douglas C. Downey, Randall D. Beer. Further Experiments in the Evolution of Minimally Cognitive Behavior: From Perceiving Affordances to Selective Attention. *Proceedings of the Sixth International Conference on the Simulation of Adaptive Behavior*, 2000.