

# PARAG SINGLA

Computer Science and Engineering  
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## RESEARCH INTERESTS

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Machine Learning, Data Mining, Satisfiability Testing, Social Networks Analysis

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## EDUCATION

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- **Doctor of Philosophy**  
Department of Computer Science & Engineering  
University of Washington, Seattle, WA  
Thesis: Markov Logic: Theory, Algorithms and Applications  
Graduation: August 2008 (*expected*)
- **Master of Science**  
Department of Computer Science & Engineering  
University of Washington, Seattle, WA  
Thesis: Collective Record Linkage  
Graduation: June 2004
- **Bachelor of Technology**  
Department of Computer Science & Engineering  
Indian Institute of Technology Bombay, India  
Thesis: Keyword Search In Databases  
Graduation: August 2002

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## PUBLICATIONS

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- Parag Singla and Pedro Domingos. Lifted First-Order Belief Propagation. *AAAI-08*. *To appear*.
- Parag Singla and Matthew Richardson. Yes, There is a Correlation - From Social Networks to Personal Behavior on the Web. *WWW-08*. *To appear*.
- Pedro Domingos, Stanley Kok, Daniel Lowd, Hoifung Poon, Matthew Richardson and Parag Singla. Markov Logic. *In Probabilistic Inference and Logic Programming (edited by L. De Raedt, P. Frasconi, K. Kersting and S. Muggleton.)*. *To appear*.
- Parag Singla and Pedro Domingos. Markov Logic in Infinite Domains. *UAI-07 (pp. 368 - 375)*.
- Parag Singla and Pedro Domingos. Entity Resolution with Markov Logic. *ICDM-06 (pp. 572 - 582)*.
- Parag Singla and Pedro Domingos. Memory-Efficient Inference in Relational Domains. *AAAI-06 (pp. 488 - 493)*.
- Pedro Domingos, Stanley Kok, Hoifung Poon, Matthew Richardson and Parag Singla. Unifying Logical and Statistical AI. *AAAI-06 (pp. 2 - 7)*.
- Parag Singla and Pedro Domingos. Discriminative Training of Markov Logic Networks. *AAAI-05 (pp. 868 - 873)*.
- Parag Singla and Pedro Domingos. Object Identification with Attribute-Mediated Dependences. *PKDD-05 (pp. 297 - 308)*.
- Parag and Pedro Domingos. Multi-Relational Record Linkage. *KDD-2004 Workshop on Multi-Relational Data Mining (pp. 31-48)*.

- B. Aditya, Soumen Chakrabarti, Rushi Desai, Arvind Hulgeri, Hrishikesh Karambelkar, Rupesh Nasre, Parag and S. Sudarshan. User Interaction in the BANKS System. *ICDE-03* (pp. 786 - 788).
- B. Aditya, Gaurav Bhalotia, Soumen Chakrabarti, Arvind Hulgeri, Charuta Nakhe, Parag and S. Sudarshan. BANKS: Browsing and Keyword Searching in Relational Databases. *VLDB-02* (pp. 1083 - 1086).

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## RESEARCH AND PROFESSIONAL EXPERIENCE

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- **University of Washington, Seattle** **Jan 04 - till date**  
 Position: Research Assistant  
 Projects:
  - Algorithms for efficient learning and inference in Markov logic
  - Extending the semantics of Markov logic to infinite domains
  - Application of Markov logic to entity resolution
  - Object-Identification using collective information
- **Kodak Research Labs, Rochester** **Jun 07 - Aug 07**  
 Position: Summer Intern.  
 Project: Discovering social relationships from personal photo collections using Markov logic.
- **Microsoft Research, Redmond** **Jul 06 - Sep 06**  
 Position: Summer Intern.  
 Project: Finding a correlation between the personal behavior of people on the web (i.e. keyword searches, demographics etc.) and their social behavior (i.e. talking characteristics on IM).
- **IIT Bombay, Mumbai** **Jul 01 - Aug 02**  
 Position: Undergraduate Researcher.  
 Project: Supporting web like keyword search in databases.
- **IBM India Research Lab, New Delhi** **May 01 - Jul 01**  
 Position: Summer Intern.  
 Project: Agglomerative clustering of a set of proper nouns using the features extracted from the web.

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## TEACHING EXPERIENCE

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**University of Washington, Seattle.** *Teaching Assistant.*

- CSE 142/143: Computer Programming (Undergraduate) **Au 02, Wi 03**
- CSE P546: Data Mining (Professional Masters) **Sp 03, Au 04**
- CSE 531: Computability and Complexity (Graduate) **Au 03**

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## PATENTS AND SOFTWARE

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### Patents Filed:

- Matthew Richardson and Parag Singla. Using Joint Communication and Search Data. Microsoft Corporation, 2007.
- Jiebo Luo, Parag Singla, Henry Kautz and Andrew Gallagher. Discovering Social Relationships from Personal Photo Collections. Eastman Kodak Company, 2008 (*in process of filing*)

### Software Developed:

- Alchemy: System for Statistical Relational AI.  
<http://alchemy.cs.washington.edu>.  
 (Along with various other contributors.)

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## PROFESSIONAL ACTIVITIES

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- Reviewer for
  - ACM Transactions on Knowledge Discovery from Data
  - Annals of Mathematics and Artificial Intelligence
- Volunteer for Engineering Open House, University of Washington, 2007.

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## ACADEMIC ACHIEVEMENTS

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- Winner of the Student Travel Award at ICDM-06. **2006**
- Winner of the Best Paper Award at PKDD-05. **2005**
- In the Joint Entrance Examination for securing admission to the IIT, was placed **Ninety Nine** in India among approximately 100,000 competitive students who took the examination. **1998**
- Recipient of Merit Certificate under National Scholarship Scheme for CBSE (Central Board for Secondary Education) Grade Twelve Examination, India. **1998**
- Ranked **1st** in the whole District for the High School (Grade Ten) Examination, India. **1996**

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## EXTRA CURRICULAR ACTIVITIES

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- Board Member, Hindu YUVA, University of Washington. **2004 - till date**
- Coordinator, Group for Rural Activities, IIT Bombay. **2001 - 2002**
- Recipient of the Organizational Color, IIT Bombay. **2002**

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## REFERENCES

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- **Pedro Domingos**  
Department of Computer Science & Engineering,  
University of Washington, Seattle.  
*pedrod@cs.washington.edu*
  - **Henry Kautz**  
Department of Computer Science,  
University of Rochester, Rochester.  
*kautz@cs.rochester.edu*
  - **Marina Meila**  
Department of Statistics,  
University of Washington, Seattle.  
*mmp@stat.washington.edu*
  - **Matthew Richardson**  
Microsoft Research, Redmond.  
*mattri@microsoft.com*
  - **Jiebo Luo**  
Kodak Research Labs, Rochester.  
*jiebo.luo@kodak.com*
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