

# Junming Sui

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## Education

University of Wisconsin-Madison, Madison, WI

*Ph.D.* in Computer Sciences, Minor in Statistics June, 2015

*M.Sc.* in Computer Sciences December, 2011

Advisor: Xiaojin (Jerry) Zhu

Nanjing University, Nanjing, China

*M.Eng.* in Computer Applied Technology June, 2009

*B.Sc.* in Computer Science and Technology June, 2006

Advisor: Zhi-Hua Zhou

## Research Areas

Machine Learning, Natural Language Processing and their applications. Currently, I am actively working on social media analysis and mining.

## Professional Experiences

**Research Assistant** August, 2009–present  
*University of Wisconsin-Madison* Madison, WI

- Collected, processed, and analyzed social media for several applications
- Built metric learning and feature selection models for psychology research
- Conduct research on semi-supervised learning, active learning, and structure sparsity

**Software Engineering Intern** May–August, 2012  
*Google, Inc.* Kirkland, WA

- Designed an algorithm to help advertising campaigns reach more audience of interest
- Implemented the algorithm with Google MapReduce and BigTable infrastructure
- Evaluated its performance and proposed potential directions to improve

**Research and Development Engineer Intern** June–August, 2011  
*Networked Insights, Inc.* Madison, WI

- Developed a prototype system to classify social media data to facilitate marketing decisions
- Explored semi-supervised learning and active learning techniques to reduce labeling costs
- Presented research work on all-staff meeting and communicated with other departments

**Research Assistant** July, 2005–June, 2009  
*Nanjing University* Nanjing, China

- Investigated the relationship between semi-supervised learning and multi-instance learning
- Improved naive Bayes algorithm with frequent item set mining techniques

**Visiting Student** September–December, 2008  
*University of Cagliari* Cagliari, Italy

- Proposed a novel active semi-supervised learning method to better exploit unlabeled emails
- Evaluated the algorithm with a real open-source spam filter SpamAssassin

## Publications

### Journal Papers

Amy Bellmore, Angela J. Calvin, **Jun-Ming Xu**, and Xiaojin Zhu. The five W's of bullying on Twitter: Who, what, why, where, when. *Computers in Human Behavior*, 44: 305-314, March 2015.

Angela J. Calvin, Amy Bellmore, **Jun-Ming Xu**, and Xiaojin Zhu. #bully: Uses of Hashtags in Posts about Bullying on Twitter. *Journal of School Violence*, 14(1): 133-153, 2015.

**Jun-Ming Xu**, Xiaojin Zhu, and Timothy T. Rogers. Metric learning for estimating psychological similarities. *ACM Transactions on Intelligent Systems and Technology (ACM TIST)*, 3(3): 55:1-55:22, 2012.

**Jun-Ming Xu**, Yuan Jiang, and Zhi-Hua Zhou. Bayesian classifier based on frequent item sets mining. *Journal of Computer Research and Development*, 44(8): 1293-1300, 2007. (in Chinese, Best student paper of 2nd Chinese Conference on Classification Technology and Applications)

### Referred Conference Papers

**Jun-Ming Xu**, Hsun-Chih Huang, Amy Bellmore, and Xiaojin Zhu. School Bullying in Twitter and Weibo: a Comparative Study. In *Proceedings of the 8th International AAAI Conference on Weblogs and Social Media (ICWSM)*, Ann Arbor, MI, 2014, pp.631-634. (acceptance rate 18/44=41%).

**Jun-Ming Xu**, Aniruddha Bhargava, Robert Nowak, and Xiaojin Zhu. Socioscope: Spatio-Temporal Signal Recovery from Social Media (extended abstract). In *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI)*, Beijing, China, 2013, pp.3096-3100. (invited paper)

**Jun-Ming Xu**, Benjamin Burchfiel, Xiaojin Zhu, and Amy Bellmore. An examination of regret in bullying tweets. In *Proceedings of 2013 Conference of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL HLT)*, Atlanta, GA, 2013, pp.697-702. (acceptance rate 37%).

**Jun-Ming Xu**, Aniruddha Bhargava, Robert Nowak, and Xiaojin Zhu. Socioscope: Spatio-Temporal Signal Recovery from Social Media. In *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD)*, Bristol, UK, 2012, pp.644-659. (acceptance rate 105/443=24%) **Best Paper in Knowledge Discovery at ECML-PKDD 2012.**

**Jun-Ming Xu**, Kwang-Sung Jun, Xiaojin Zhu, and Amy Bellmore. Learning from Bullying Traces in Social Media. In *Proceedings of 2012 Conference of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL HLT)*, Montreal, Canada, 2012, pp.656-666. (acceptance rate 61/197 = 31%).

Andrew Goldberg, Xiaojin Zhu, Alex Furger, and **Jun-Ming Xu**. OASIS: Online active semisupervised learning. In *Proceedings of the 25th Conference on Artificial Intelligence (AAAI'11)*, San Francisco, CA, 2011, pp.263-267. (acceptance rate 25%, selected for additional poster highlight).

Chen Yu, **Jun-Ming Xu**, and Xiaojin Zhu. Word learning through sensorimotor child-parent interaction: A feature selection approach. In *Proceedings of the 33rd Annual Conference of the Cognitive Science Society (CogSci'11)*, Boston, MA, 2011, pp.1601-1696. (oral, acceptance rate 32%).

Andrew Goldberg, Xiaojin Zhu, Benjamin Recht, **Jun-Ming Xu**, and Robert Nowak. Transduction with matrix completion: Three birds with one stone. In *Advances in Neural Information Processing Systems (NIPS) 23*, 2010, pp.757-765. (acceptance rate 24%).

**Jun-Ming Xu**, Giorgio Fumera, Fabio Roli, and Zhi-Hua Zhou. Training SpamAssassin with active semi-supervised learning. In *Proceedings of the 6th Conference on Email and Anti-Spam (CEAS'09)*, Mountain View, CA, 2009.

Zhi-Hua Zhou and **Jun-Ming Xu**. On the relation between multi-instance learning and semi-supervised learning. In *Proceedings of the 24th International Conference on Machine Learning (ICML'07)*, Corvallis, OR, 2007, pp.1167-1174. (acceptance rate 29%).

### Referred Workshop Papers

**Jun-Ming Xu**, Xiaojin Zhu, and Amy Bellmore. Fast learning for sentiment analysis on bullying. In *ACM KDD Workshop on Issues of Sentiment Discovery and Opinion Mining (WISDOM)*, Beijing, China, 2012.

Xiaojin Zhu, **Jun-Ming Xu**, Christine M. Marsh, Megan K. Hines, and F. Joshua Dein. Machine learning for zoonotic emerging disease detection. In *ICML 2011 Workshop on Machine Learning for Global Challenges*, Bellevue, WA, 2011.

### Skills

Programming Languages: Java, Matlab, C/C++, Python, Shell, R

Machine Learning Packages: Weka, SVM-light, libSVM, Hive

Natural Language Processing Packages: Stanford Core-NLP, Mallet, Lucene

### Honors and Awards

ICWSM-14 Student Travel Award	2014
AAAI 2013 Fall Symposium Series Travel Award	2013
IJCAI-13 Student Travel Award	2013
Best Paper on Knowledge Discovery, "Socioscope: Spatio-Temporal Signal Recovery from Social Media" The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD)	2012
International Student Academic Achievement Award, University of Wisconsin-Madison	2011
Excellent Master Thesis Award, Jiangsu Province, China	2010
Outstanding Graduate Student	2008
Best Student Paper Award of 2nd Chinese Conference on Classification Technology and Applications	2007
Scholarship for Outstanding Graduate Students	2007
Excellent Bachelor Thesis, Nanjing University	2006

First Class Renmin Scholarship of Nanjing University	2003–2006
Excellent Undergraduate Student	2003–2005
Third Prize (in Jiangsu Province) in China Undergraduate Mathematical Contest in Modeling	2004
First Place in the 1st Programming Competition of Nanjing University	2003

## Professional Activities

### Program Committee

- The 30th AAAI Conference on Artificial Intelligence (AAAI-16)
- The 4th CCF Conference on Natural Language Processing & Chinese Computing (NLPPCC 2015)
- The 24th International Joint Conference on Artificial Intelligence (IJCAI-15)
- The 32nd International Conference on Machine Learning (ICML-15)
- ACL 2015 Workshop on Noisy User-generated Text (W-NUT)

### Reviewer

- Machine Learning
- The IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- The 29th Annual Conference on Neural Information Processing Systems (NIPS-15)
- Pattern Recognition (Elsevier)
- The 28th AAAI Conference on Artificial Intelligence (AAAI-14)
- The 3rd CCF Conference on Natural Language Processing & Chinese Computing (NLPPCC 2014)
- International Conference on Information Systems 2014
- Knowledge-Based Systems (Elsevier)
- Science China Information Sciences

## Teaching Experiences

Co-leader, <i>Reading Group on Probability and Random Processes</i> University of Wisconsin-Madison	Spring 2015
Organizer, <i>Structured Sparsity Reading Group</i> University of Wisconsin-Madison	Spring 2011
Teaching Assistant, <i>Principle of Compiling</i> Nanjing University	Spring 2007

## Volunteer Experiences

The 23rd International Joint Conference on Artificial Intelligence	2013
The 11th Pacific-Asia Conference on Knowledge Discovery and Data Mining	2007

