Jundong Li

Contact Information

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Research Interests

- Data Mining: dimensionality reduction; dynamic networks; data streams; network embedding; relational learning; anomaly detection; online learning; sentiment analysis; recommender systems; clustering; active learning; semi-supervised learning; associative classification; co-location pattern mining; spatial-temporal data mining
- Feature Selection: unsupervised feature selection; feature selection on networks; feature selection on dynamic networks; streaming feature selection; multi-label feature selection; feature selection on signed networks; personalized feature selection
- Social Computing: social network analysis; signed social networks; reciprocal link analysis; user behavior analysis; social cyberbullying detection; social mental health; social security

Education

Arizona State University, Tempe, Arizona, USA
Ph.D., Computer Science and Engineering — Aug 2014 - Present

- GPA: 4.00/4.00
- Advisor: Huan Liu, Ph.D, Fellow of IEEE

University of Alberta, Edmonton, Alberta, Canada
M.Sc., Department of Computing Science — Sep 2012 - Jul 2014

- GPA: 4.00/4.00
- Advisor: Osmar R. Zaïane, Ph.D

Zhejiang University, Hangzhou, Zhejiang, China
B.Eng., College of Computer Science and Technology — Aug 2008 - Jun 2012

- GPA: 3.71/4.00

Research Experiences

Intern Scientist, Yahoo! Research — May 2016 - Aug 2016
Mentor: Yi Chang, Ph.D and Jiliang Tang, Ph.D

- Reciprocal behaviors analysis on dynamic social networks
- User reciprocal delay prediction on Tumblr

Research Assistant, Computer Science, ASU — Dec 2014 - present
Advisor: Huan Liu, Ph.D, Fellow of IEEE

- Feature selection for social media data
- Dynamic social network analysis
- Social relational learning
- Anomaly detection on networks
- Feature selection repository - *scikit-feature* (news coverage on KDnuggets)

Research Assistant, Computing Science, UAlberta — May 2013 - Jul 2014
Advisor: Osmar R. Zaïane, Ph.D

- Associative classification with statistically significant rules
- Co-location pattern mining on extended spatial objects

Refereed Book Chapters

[C1] Luiza Antonie, **Jundong Li**, Osmar R. Zaïane. "Negative Association Rules", In Frequent Pattern Mining (editors: Charu C. Aggarwal and Jiawei Han), Springer, 2014.

Refereed Journal Publications

[J1] **Jundong Li**, Kewei Cheng, Suhang Wang, Fred Morstatter, Robert P. Trevino, Jiliang Tang and Huan Liu. "Feature Selection: A Data Perspective", arXiv preprint, arXiv:1601.07996.

[J2] **Jundong Li**, Huan Liu. "Challenges of Feature Selection for Big Data Analytics", IEEE Intelligent Systems (Special Issue on Big Data), 2016 (To Appear). arXiv preprint, arXiv:1611.01875.

[J3] **Jundong Li**, Osmar R. Zaïane. "Exploiting Statistically Significant Dependent Rules for Associative Classification", Intelligent Data Analysis: An International Journal, 2016 (To Appear).

[J4] **Jundong Li**, Aibek Adilmagambetov, M. Shazan M. Jabbar, Osmar R. Zaïane, Alvaro Osornio-Vargas and Osnat Wine. "On Discovering Co-Location Patterns in Datasets: A Case Study of Pollutants and Child Cancers", Geoinformatica, 20(4), 651-692, 2016.

[J5] Ling Jian, Shuqian Shen, **Jundong Li**, Xijun Liang and Lei Li. "Budget Online Learning Algorithm for Least Squares SVM", IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 2016 (To Appear).

Refereed Conference Publications

[C1] **Jundong Li**, Liang Wu, Osmar R. Zaïane, Huan Liu. "Personalized Relational Learning", In Proceedings of 17th SIAM International Conference on Data Mining (SDM). Apr 27-29, 2017, Houston, USA.

[C2] Liang Wu, **Jundong Li**, Xia Hu, Huan Liu. "Gleaning Wisdom From The Past: Early Detection of Emerging Rumors in Social Media", In Proceedings of 17th SIAM International Conference on Data Mining (SDM). Apr 27-29, 2017, Houston, USA.

[C3] Xiao Huang, **Jundong Li**, Xia Hu. "Accelerated Attributed Network Embedding", In Proceedings of 17th SIAM International Conference on Data Mining (SDM). Apr 27-29, 2017, Houston, USA.

[C4] Yilin Wang, Jiliang Tang, **Jundong Li**, Baoxin Li, Yali Wan, Clayton Mellina, Neil O'Hare, Yi Chang. "Understanding and Discovering Deliberate Self-harm Content in Social Media", In Proceedings of 26th International World Wide Web Conference (WWW). Apr 3-7, 2017, Perth, Australia.

[C5] Kewei Cheng, **Jundong Li**, Jiliang Tang, Huan Liu. "Unsupervised Sentiment Analysis with Signed Social Networks", In Proceedings of 31st AAAI Conference on Artificial Intelligence (AAAI), Feb 4-9, 2017, San Francisco, CA, USA.

[C6] Xiao Huang, **Jundong Li**, Xia Hu. "Label Informed Attributed Network Embedding", In Proceedings of 10th ACM International Conference on Web Search and Data Mining (WSDM). Feb 6-10, 2017, Cambridge, UK.

[C7] **Jundong Li**, Xia Hu, Ling Jian, Huan Liu. "Toward Time-Evolving Feature Selection on Dynamic Networks", In Proceedings of 16th IEEE International Conference on Data Mining (ICDM). Dec 12-15, 2016, Barcelona, Spain.

[C8] Kewei Cheng, **Jundong Li**, Huan Liu. "FeatureMiner: A Tool for Interactive Feature Selection" (demo), In Proceedings of 25th ACM International Conference on Information and Knowledge Management (CIKM). Oct 24-28, 2016, Indianapolis, USA.

[C9] **Jundong Li***, Ling Jian*, Kai Shu, Huan Liu. (* equally contributed) "Multi-Label Informed Feature Selection", In Proceedings of 25th International Joint Conference on Artificial Intelligence (IJCAI). Jul 9-15, 2016, New York, USA.

[C10] **Jundong Li**, Xia Hu, Liang Wu, Huan Liu. "Unsupervised Streaming Feature Selection in Social Media", In Proceedings of 16th SIAM International Conference on Data Mining (SDM). May 5-7, 2016, Miami, USA.

[C11] **Jundong Li**, Xia Hu, Jiliang Tang, Huan Liu. "Unsupervised Streaming Feature Selection in Social Media", In Proceedings of 24th ACM International Conference on Information and Knowledge Management (CIKM). Oct 19-23, 2015, Melbourne, Australia.

[C12] **Jundong Li**, Osmar R. Zaïane "Associative Classification with Statistically Significant Positive and Negative Rules", In Proceedings of 24th ACM International Conference on Information and Knowledge Management (CIKM). Oct 19-23, 2015, Melbourne, Australia.

[C13] **Jundong Li**, Osmar R. Zaïane, Alvaro Osornio-Vargas. "Discovering Statistically Significant Co-location Rules in Datasets with Extended Spatial Objects", In Proceedings of 16th International Conference on Data Warehousing and Knowledge Discovery (DaWaK). Sep 2-4, 2014, Munich, Germany.

[C14] **Jundong Li**, Jörg Sander, Ricardo G.J.B. Campello, Arthur Zimek. "Active Learning Strategies for Semi-supervised DBSCAN", In Proceedings of 27th Canadian Conference on Artificial Intelligence (AI). May 6-9, 2014, Montreal, Canada.

Teaching Experiences

Teaching Assistant, Computer Science, ASU Aug 2014 - Dec 2014
- CSE 205: Object-oriented programming and data structures
- CSE 412: Database management

Teaching Assistant, Computing Science, UAlberta Sep 2012 - May 2013
- CMPUT 174: Introduction to the foundations of computation I

Invention Disclosures

- M16-052P: Systems and Methods for Unsupervised Streaming Feature Selection in Social Media (2016)

Honors and Awards

- University Graduate Fellowship, ASU 2017
- SDM Student Travel Award 2017
- CIDSE Department Nomination for Microsoft Fellowship, ASU 2016
- ICDM Student Travel Award 2016
- CIKM Student Travel Award 2015
- GSA Professional Development Award, UAlberta 2014
- FGSR Travel Award, UAlberta 2014
- Computing Science Department GPA Award, UAlberta 2014
- CS Department Nomination for BMO Scholarship, UAlberta 2013

Presentations & Talks

- "Toward Time-Evolving Feature Selection on Dynamic Networks", in ICDM conference, Barcelona, Spain, 2016.
- "Understanding and Predicting Delay in Reciprocal Relations", in Yahoo! Research, Sunnyvale, USA, 2016.
- "Dynamic Attributed Network Embedding", in Yahoo! Research, Sunnyvale, USA, 2016.
- "Multi-Label Informed Feature Selection", in IJCAI conference, New York, USA, 2016.
- "Robust Unsupervised Feature Selection on Networked Data", in SDM conference, Miami, USA, 2016.
- "Unsupervised Streaming Feature Selection in Social Media", in CIKM conference, Melbourne, Australia, 2015.

- "Associative Classification with Statistically Significant Positive and Negative Rules", in CIKM conference, Melbourne, Australia, 2015.
- "Active Learning Strategies for Semi-supervised DBSCAN", in Canadian AI conference, Montreal, Canada, 2014.

Service

Program Committee:

- International Joint Conference on Artificial Intelligence (IJCAI), 2017

Journal Reviewer:

- Journal of Machine Learning Research (JMLR)
- Machine Learning Journal (MLJ)
- IEEE Transactions on Knowledge and Data Engineering (TKDE)
- IEEE Transactions on Big Data (TBD)
- IEEE Intelligent System (IS)
- IEEE Transactions on Multimedia (TMM)
- IEEE Transactions on Image Processing (TIP)
- ACM Transactions on Knowledge Discovery from Data (TKDD)
- Data Mining and Knowledge Discovery (DMKD)
- Knowledge and Information Systems (KAIS)
- Pattern Recognition (PR)
- Neurocomputing (NEUCOM)
- Journal of Computer Science and Technology (JCST)
- Frontiers in Disaster Communications

Conference External Reviewer:

- AAAI Conference on Artificial Intelligence (AAAI), 2016, 2017
- International Joint Conference on Artificial Intelligence (IJCAI), 2015
- ACM International Conference on Information and Knowledge Management (CIKM), 2016
- ACM International Conference on Web Search and Data Mining (WSDM), 2016, 2017
- ACM International Conference on World Wide Web (WWW), 2015, 2016
- ACM Conference on Recommender Systems (Recsys), 2015
- SIAM International Conference on Data Mining (SDM), 2015, 2016, 2017
- IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2015, 2016
- Asian Conference on Machine Learning (ACML), 2016
- International Conference on Healthcare Informatics (ICHI), 2015

Conference Volunteer:

- ACM SIGKDD Conferences on Knowledge Discovery and Data Mining (KDD), 2016

References

Available upon requests