CURRICULUM VITAE

Xiaoguang Wang   fridaymonday@hotmail.com

CAREER HIGHLIGHTS:

Dr. Xiaoguang Wang is a senior research scientist at the Alibaba Ltd. He obtained his PhD from the School of Information Technology and Engineering, University of Ottawa in 2014. Dr. Xiaoguang Wang was a research scientist at the Institute for Big Data Analytics from 2013 to 2015. His research work focuses on the analysis and development of strategies for knowledge discovery and large-scale data mining, in detail: a) Large-scale data mining in personal social credit, credit card and social network. b) Learning on class imbalance data, c) Multi-instance learning, d) Learning on Large-scale Electronic Health Record (EHR) data. He has been awarded grants from the Ontario Graduate Scholarship. He has more than 16 publications and got the best paper award of ISMIS 2008. He has previously held research posts in hospital, industry, government and academia both in North America and in Asia.

DEGREES:

PH.D., Computer Science, University of Ottawa, Ontario   2010 – 2014

Specialization: Large-scale Data Mining and Machine Learning

M.Sc., Computer Science, University of Ottawa, Ontario   2003 – 2005

Specialization: Machine Learning

EMPLOYMENT HISTORY:

Senior Research Scientist

Institute of Data Science & Technologies, Alibaba Ltd.   2015 – present

Research Associate

Institute for Big Data Analytics, Dalhousie University   2013 – 2015

Machine Learning Researcher

The Text Analysis and Machine Learning Group, University of Ottawa   2010 – 2014

Visiting Scientist

Wuhan University, China   2009 – 2010

Senior Data Scientist

University of Ottawa Heart Institute   2007 – 2008

Data Analyst

University of Ottawa Heart Institute   2005 – 2007

SCHOLARLY AND PROFESSIONAL ACTIVITIES:

More than 16 Patents in industry.

Publications:

Articles published or accepted in refereed Journals

[1] Wang, X., Liu, X., Japkowicz, N., & Matwin, S. (2014). Automatic Target Recognition Using Multiple-Aspect Sonar Images. Journal of Artificial Intelligence and Soft Computing Research. accepted, date of acceptance 2014-9-20, 12 pages.

[2] Wang, X., Japkowicz, N., Boosting support vector machines for imbalanced data sets. Knowl. Inf. Syst. 25(1): 1-20 (2010). in press, date of acceptance 2010-8-2, 10 pages.

[3] Liu, X., Wang, X., Matwin, S., & Japkowicz, N. (2015) Meta-MapReduce for Scalable Data Mining. Journal of Big Data. 12 pages.

Papers in refereed conference proceedings

[4] Wang, X., Liu, X., Matwin, S. & Japkowicz, N., Guo, H., A Multi-View Two-level Classification Method for Generalized Multi-instance Problems. 2014 IEEE International Conference on Big Data, 104-111.

[5] Wang, X., Liu, X., Bo Liu, Erico N. de Souza & Matwin, S., Vessel Route Anomaly Detection with Hadoop MapReduce. 2014 IEEE International Conference on Big Data, 25-30.

[6] Wang, X., Liu, X., Matwin, S. & Japkowicz, N., Applying Instance-weighted Support Vector Machines to Class Imbalanced Datasets. 2014 IEEE International Conference on Big Data 112-118.

[7] Wang, X., Liu, X. & Matwin, S., A Distributed Instance-weighted SVM Algorithm on Large-scale Imbalanced Datasets. 2014 IEEE International Conference on Big Data 45-51.

[8] Wang, X., Liu, X., Japkowicz, N., Matwin, S. & Nguyen B., Automatic Target Recognition using multiple-aspect sonar images. IEEE Congress on Evolutionary Computation 2014: 2330-2337.

[9] Wang, X., Liu, X., Japkowicz, N., & Matwin, S. (2013). Resampling and Cost-Sensitive Methods for Imbalanced Multi-instance Learning. 2013 IEEE International Conference on Data Mining (ICDM), in press, date of acceptance 2013-10-2, 9 pages.

[10] Wang, X., Liu, X., Japkowicz, N., & Matwin, S., Ensemble of Multiple Kernel SVM Classifiers. Canadian Conference on AI 2014: 239-250.

[11] Wang, X., Matwin, S., Japkowicz, N., & Liu, X. (2013). Cost-Sensitive Boosting Algorithms for Imbalanced Multi-instance Datasets. In Advances in Artificial Intelligence (pp. 174-186). Springer Berlin Heidelberg.

[12] Liu, X., Wang, X., Matwin, S., & Japkowicz, N. (2013). Meta-learning for Large Scale Machine Learning with MapReduce. 2013 IEEE International Conference on Big Data, in press, date of acceptance 2013-9-2, 6 pages.

[13] Liu, X., Wang, X., Japkowicz, N., & Matwin, S. (2013). An Ensemble Method Based on AdaBoost and Meta-Learning. In Advances in Artificial Intelligence (pp.278-285). Springer Berlin Heidelberg.

[14] Wang, X., Shao, H., Japkowicz, N., Matwin, S., Liu, X., Bourque, A., & Nguyen, B. (2012, December). Using SVM with Adaptively Asymmetric Misclassification Costs for Mine-Like Objects Detection. In Machine Learning and Applications (ICMLA), 2012 11th International Conference on (Vol. 2, pp. 78-82). IEEE.

[15] Wang, X., Japkowicz, N., Boosting Support Vector Machines for Imbalanced Data Sets. ISMIS 2008: 38-47 (***The Best Paper Award***).

Book Chapters

[16] Wang, X., Liu, X., Japkowicz, N., & Matwin, S. (2015). Automated Mine-like Objects Recognition Using Instance-weighted Boosting SVM on Imbalanced Multiple Instance Dataset. *Recent Advances in Computational Intelligence in Defense and Security*. Submitted, 30 pages.

Presentations:

(1) "Automatic Target Recognition using multiple-aspect sonar images", IEEE Congress on Evolutionary Computation 2014, Beijing, China. (International)

(2) "Vessel track correlation and association using fuzzy logic and Echo State Networks", IEEE Congress on Evolutionary Computation 2014, Beijing, China. (International)

(3) "Explicit feature mapping via multi-layer perceptron and its application to Mine-Like Objects detection", IJCNN 2014, Beijing, China. (International)

(4) "Cost-Sensitive Boosting Algorithms for Imbalanced Multi-instance Datasets", 2013 Canadian Conference on Artificial Intelligence, Regina, Saskatchewan, Canada. (International)

(5) "Ensemble of Multiple Kernel SVM Classifiers", Canadian Conference on AI 2014, Montreal, Quebec, Canada. (International)

(6) "Resampling and Cost-Sensitive Methods for Imbalanced Multi-instance Learning", 2013 IEEE International Conference on Data Mining (ICDM), Dallas, Texas, USA. (International)

(7) "Machine learning algorithm for Autonomous Underwater Vehicles operations", 2012 University of Ottawa Research Day, Ottawa, Ontario, Canada (Poster, Presentation, Institutional)

(8) "Boosting Support Vector Machines for Imbalanced Data Sets", 2008 Tamale seminar in University of Ottawa, Ottawa, Ontario, Canada (Presentation, Institutional)

(9) "Resampling and Cost-Sensitive Methods for Imbalanced Multi-instance Learning", 2013 Tamale seminar in University of Ottawa, Ottawa, Ontario, Canada (Presentation, Institutional)

(10) "Cost-Sensitive Boosting Algorithms for Imbalanced Multi-instance Datasets. In Advances in Artificial Intelligence", 2013 Tamale seminar in University of Ottawa, Ottawa, Ontario, Canada (Presentation, Institutional)

Paper Reviewed:

(1) "Cost-free Learning for SVM Classifiers in the Class Imbalanced Problems", (Blind review) ICML 2014, Beijing, China.
(2) Li, Q., Mao, Y., "Boosting Methods for Imbalanced Data Classification: An in-depth Study", Pattern Recognition, November 17, 2012.