

CURRICULUM VITAE



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● CAREER HIGHLIGHTS:

I am a senior AI research scientist who has 50+ publications, including papers and patents. I had worked in Alibaba Inc. for 5 years. I have led the AI team and completed 80+ of AI projects, including AIOps (MLOps), LLM, Large AI platform, Anomaly detection, Generative AI, Series Forecasting, Data-driven credit scoring model, Deep Neural Network Interpretability, Multiple Instance Learning, Imbalanced Learning, AI In Healthcare and so on. I did my Ph.D. in Computer Science at University of Ottawa under Professor Stan Matwin. I was co-advised by Professor Nathalie Japkowicz. My research interests include machine learning and applications of AI, as well as other use cases.

● EDUCATION:

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:

CHIEF SCIENTIST

UYUN Inc. 2019 – present

- Experienced AIOps Chief Scientist with a proven track record of driving innovation and optimizing IT operations through the strategic application of artificial intelligence and machine learning. A visionary leader dedicated to transforming businesses by implementing cutting-edge technologies to enhance efficiency, reduce downtime, and improve overall performance.

- Led the development and implementation of AIOps strategies to automate and optimize IT operations, resulting in reduction in system downtime and increase in overall system performance. Developed related algorithms using tools such as Kubeflow, TensorFlow, Pytorch, scikit learn and so on.

- Spearheaded a multidisciplinary team of data scientists, machine learning engineers, and IT professionals, fostering a collaborative environment that resulted in the successful deployment of AIOps platform.
- Collaborated with cross-functional teams to integrate AIOps solutions into existing workflows, ensuring seamless adoption and alignment with business objectives.
- Conducted research and stayed abreast of the latest advancements in AI and AIOps, providing thought leadership and strategic guidance to executive leadership.

Senior Research Scientist

Institute of Data Science & Technologies, Alibaba Ltd.

2015 – 2019

- Accomplished Senior AI Research Scientist with a proven track record of leading cutting edge research initiatives in artificial intelligence. Adept at developing innovative algorithms and solutions to address complex problems. Experienced in collaborative research, with a focus on advancing AI technologies for real-world applications. Seeking to contribute expertise to Alibaba's renowned AI research team.
- Led and contributed to research projects focused on AI platform-PAI (platform for Alibaba AI research and development including computer vision, natural language processing, recommendation systems, etc.)
- Developed novel machine learning algorithms and models, resulting in applications of Alibaba AI brain, including generative ai (Intelligent Shop poster Generation), anomaly detection, intelligent factory and smart city.
- Collaborated with cross-functional teams to translate research findings into practical applications and solutions for Alibaba's products and services.
- Published research papers in top-tier conferences and journals, establishing a strong presence in the AI research community.
- Mentored and supervised junior researchers, fostering a collaborative and innovative research environment.

Senior Data Scientist

University of Ottawa Heart Institute

2005 – 2010

- Spearheaded data analysis initiatives to extract actionable insights from large-scale cardiovascular datasets, contributing to the "Health Data Analyze platform".
- Developed predictive models using machine learning algorithms to identify patterns and trends in patient data, leading to improved diagnostic accuracy and personalized treatment strategies.
- Collaborated with interdisciplinary teams of researchers, clinicians, and IT professionals to integrate data science methodologies into ongoing research projects, fostering a data driven approach to healthcare.
- Published research findings in reputable journals and presented results at conferences, showcasing the institute's commitment to advancing knowledge in cardiovascular medicine.

● SKILLS

- [Machine Learning](#)
- [MLOps \(AIOps\)](#)
- [Generative ai](#)
- [LLM](#)
- [Predictive Analytics](#)
- [Cross-functional Collaboration](#)
- [Research and Development](#)
- [Deep Learning \(Pytorch/Tensorflow/Keras/SKlearn/Kubeflow\)](#)
- [Coding\(Python/Java/C++\)](#)

● SCHOLARLY AND PROFESSIONAL ACTIVITIES:

1. ACADEMIC SERVICES

KDD

- [KDD 2017 Organizing Committee member](#)
- [KDD 2018 Organizing Committee member](#)

ADJUNCT PROFESSOR

- [Dalhousie university computer science department \(2016-2019\)](#)

2. Publications:

For a complete list, see [Google Scholar](#).

THESIS

- PHD thesis: [Design and Analysis of Techniques for Multiple-Instance Learning in the Presence of Balanced and Skewed Class Distributions](#)
- Master thesis: [Boosting Support Vector Machines](#)

ARTICLES PUBLISHED OR ACCEPTED IN REFEREED JOURNALS

- [Anomaly detection in multi-class time series](#). Journal of Physics Conference Series 2113(1):012062, November 2021. Weihong Wang, Zhuolin Wu, Xuan Liu, Lei Jia and Xiaoguang Wang.
- [Automatic Target Recognition Using Multiple-Aspect Sonar Images](#). Journal of Artificial Intelligence and Soft Computing Research. 12 pages. (2014). Wang, X., Liu, X., Japkowicz, N., & Matwin, S.
- [Boosting support vector machines for imbalanced data sets](#). Knowl. Inf. Syst. 25(1): 1-20 (2010). Wang, X., Japkowicz, N.
- [Meta-MapReduce for Scalable Data Mining](#). Journal of Big Data. 12 pages. (2015) Wang, X., Japkowicz, N. Liu, X., Wang, X., Matwin, S., & Japkowicz, N.

PAPERS IN REFEREED CONFERENCE PROCEEDINGS

- [Refining Deep Neural Networks via Interpretability Using Transfer Learning.](#) Wang, X., Liu, X. CIKM 2024 : ACM International Conference on Information and Knowledge Management.
- [A Multi-View Two-level Classification Method for Generalized Multi-instance Problems.](#) Wang, X., Liu, X., Matwin, S. & Japkowicz, N., Guo, H. 2014 IEEE International Conference on Big Data, 104-111.
- [Vessel Route Anomaly Detection with Hadoop MapReduce.](#) Wang, X., Liu, X., Bo Liu, Erico N. de Souza & Matwin, S. 2014 IEEE International Conference on Big Data, 25-30.
- [Applying Instance-weighted Support Vector Machines to Class Imbalanced Datasets.](#) Wang, X., Liu, X., Matwin, S. & Japkowicz, N. 2014 IEEE International Conference on Big Data, 112-118.
- [A Distributed Instance-weighted SVM Algorithm on Large-scale Imbalanced Datasets.](#) Wang, X., Liu, X. & Matwin, S. 2014 IEEE International Conference on Big Data, 45-51.
- [Automatic Target Recognition using multiple-aspect sonar images.](#) Wang, X., Liu, X., Japkowicz, N., Matwin, S. & Nguyen B. IEEE Congress on Evolutionary Computation 2014: 2330-2337.
- [Resampling and Cost-Sensitive Methods for Imbalanced Multi-instance Learning.](#) Wang, X., Liu, X., Japkowicz, N., & Matwin, S. 2013 IEEE International Conference on Data Mining (ICDM), 9 pages.
- [Ensemble of Multiple Kernel SVM Classifiers.](#) Wang, X., Liu, X., Japkowicz, N., & Matwin, S. Canadian Conference on AI 2014: 239-250.
- [Cost-Sensitive Boosting Algorithms for Imbalanced Multi-instance Datasets.](#) Wang, X., Matwin, S., Japkowicz, N., & Liu, X. In Advances in Artificial Intelligence (pp. 174-186). Springer Berlin Heidelberg.
- [Meta-learning for Large Scale Machine Learning with MapReduce.](#) Wang, X., Matwin, S., Japkowicz, N., & Liu, X. 2013 IEEE International Conference on Big Data, 6 pages.
- [An Ensemble Method Based on AdaBoost and Meta-Learning.](#) Liu, X., Wang, X., Japkowicz, N., & Matwin, S. In Advances in Artificial Intelligence (pp.278-285). Springer Berlin Heidelberg.
- [Using SVM with Adaptively Asymmetric Misclassification Costs for Mine-Like Objects Detection.](#) Wang, X., Shao, H., Japkowicz, N., Matwin, S., Liu, X., Bourque, A., & Nguyen, B. (2012). In Machine Learning and Applications (ICMLA), 2012 11th International Conference on (Vol. 2, pp. 78-82). IEEE.
- [Boosting Support Vector Machines for Imbalanced Data Sets.](#) Wang, X., Japkowicz, N. (2012). ISMIS 2008: 38-47 (The Best Paper Award).

BOOK CHAPTERS

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

3. Patents:

- [Training method, credit estimation method and the device of credit evaluation model.](#) Patent number : CN107301577A
- [Model training method, sample balancing method, model training device, sample balancing device and personal credit scoring system](#) Patent number : CN106909981B
- [Model data updating method, device and system](#) Patent number : CN107229966B
- [Model training method, apparatus and system and sample set optimization method, device](#) Patent number : CN106934413A
- [A kind of Risk Forecast Method and equipment](#) Patent number : CN106779272A
- [Method and device for determining user intention based on user voice information](#) Patent number : CN108205525B
- [The method and device that the belonging kinds of data are predicted](#) Patent number : CN107203774A
- [The sorting technique and system of data](#) Patent number : CN106934410A
- [A kind of method and device for optimizing user credit model modeling process](#) Patent number : CN106997484A
- [A kind of Feature Selection method and device](#) Patent number : CN107169571A
- [Feature engineering strategy determination method and device](#) Patent number : CN107168965B
- [User characteristics sorting technique, user credit appraisal procedure and the device of user credit model](#) Patent number : CN106997472A
- [A kind of method and device for screening user characteristics](#) Patent number : CN106874286A
- [A kind of information extracting method and device](#) Patent number : CN107133207A
- [User group classification method and device](#) Patent number : CN106897282B
- [User credit model establishing method and device](#) Patent number : CN107203916B
- [object grouping method, model training method and device](#) Patent number : CN106874925A
- [Intelligent operation and maintenance system based on data middling platform technology](#) Patent number : CN112182077B

- [Intelligent operation and maintenance framework system based on AIOps](#) Patent number : CN112181960B
- [Three-dimensional microscopic road network generation method capable of realizing real-time interaction](#) Patent number : CN111535099B
- [Method and system for adaptively calculating IT intelligent operation and maintenance health index](#) Patent number : CN113360358A
- [Fault root cause positioning method and system based on multidimensional data map](#) Patent number : CN113360722A
- [Semi-supervised man-machine combined operation and maintenance fault library generation method and system](#) Patent number : CN112783865A
- [Disk capacity prediction method for identifying manual cleaning behavior based on second-order difference method](#) Patent number : CN113157204B

● **AWARDS**

- [2008 ISMIS best paper award](#)
- [2016, 2017 best employee of Alibaba](#)