Jiashu Wu

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EDUCATION

University of Chinese Academy of Sciences   Beijing, China
Doctor of Philosophy in Computer Science, advisor: Prof. Yang Wang   Sept 2021 - Jun 2024 (Expected)

University of Melbourne   Melbourne, Australia
Master of Information Technology (with Distinction)   Jan 2019 - Dec 2020
Major: Artificial Intelligence, advisor: Prof. Rui Zhang, average mark: 88.1 (First Class Honour, top 2%)

University of Sydney   Sydney, Australia
Bachelor of Science   Jan 2016 - Dec 2018
Major: Computer Science, Financial Mathematics & Statistics, advisor: Prof. Simon Poon, average mark: 86.5
(High Distinction, top 2%)

RESEARCH INTERESTS

My research interest focuses on applying domain adaptation (DA) to enhance the efficacy of IoT intrusion
detection. The DA techniques I studied including heterogeneous DA, multi-source DA, semi-supervised DA,
unsupervised DA, open-set DA, etc.

PUBLICATIONS (FULL LIST: GOOGLE SCHOLAR)

I: IoT Intrusion Detection via Domain Adaptation and its Efficiency Improvement

1. Adaptive Bi-Recommendation and Self-improving Network for Heterogeneous Domain
   Adaptation-assisted IoT Intrusion Detection
   Jiashu Wu, Yang Wang✉, Hao Dai, Chengzhong Xu, Kenneth B. Kent
   IEEE Internet of Things Journal (**IEEE IoTJ**, IF: 10.24), 2023

2. Heterogeneous Domain Adaptation for IoT Intrusion Detection: A Geometric Graph Alignment Approach
   Jiashu Wu, Hao Dai, Yang Wang✉, Kejiang Ye, Chengzhong Xu
   IEEE Internet of Things Journal (**IEEE IoTJ**, IF: 10.24), 2023

3. Cost-Efficient Sharing Algorithms for DNN Model Serving in Mobile Edge Networks
   Hao Dai, **Jiashu Wu**, Yang Wang✉, Jerome Yen, Yong Zhang, Chengzhong Xu
   IEEE Transactions on Services Computing (**IEEE TSC**, IF: 11.02), 2023

4. Joint Semantic Transfer Network for IoT Intrusion Detection
   Jiashu Wu, Yang Wang✉, Binhui Xie, Shuang Li, Hao Dai, Kejiang Ye, Chengzhong Xu
   IEEE Internet of Things Journal (**IEEE IoTJ**, IF: 10.24), 2022

5. PackCache: An Online Cost-driven Data Caching Algorithm in the Cloud
   Jiashu Wu, Hao Dai, Yang Wang✉, Yong Zhang, Dong Huang, Chengzhong Xu
   IEEE Transactions on Computers (**IEEE TC**, IF: 3.18), 2022

6. Towards Scalable and Efficient Deep-RL in Edge Computing : A Game-based Partition Approach
   Hao Dai, **Jiashu Wu**, Yang Wang✉, Chengzhong Xu
   Journal of Parallel and Distributed Computing (**JPDC**, IF: 4.54), 2022

7. Multi-Scenario Bimetric-Balanced IoT Resource Allocation: An Evolutionary Approach
   Jiashu Wu, Hao Dai, Yang Wang✉, Zhiying Tu
   IEEE International Conference on High Performance Computing and Communications (**IEEE HPCC**),
   2022

8. Simultaneous Semantic Alignment Network for Heterogeneous Domain Adaptation
Shuang Li, Binhui Xie, **Jiashu Wu**, Ying Zhao, Chi Harold Liu✉, Zhengming Ding
ACM International Conference on Multimedia (**ACM MM**, IS: 12.9), 2020, Seattle, Washing, USA

9. Open Set Dandelion Network for IoT Intrusion Detection
Jiashu Wu, Hao Dai, Yang Wang✉, Kenneth B. Kent, Chengzhong Xu
Under review at *ACM Transactions on Internet Technology* (**ACM TOIT**, IF: 3.99), 2023

II: Thesis

10. Research on IoT Intrusion Detection via Domain Adaptation Approach
Ph.D Thesis at the University of Chinese Academy of Sciences

11. Learning to Rank with Small Set of Ground Truth Data
Master Thesis at the University of Melbourne

III: Patents

Five Chinese patents already be granted and 14 Chinese patents under examination

Award

- Outstanding Student, University of Chinese Academy of Sciences, 2022

- Graduate with Distinction, University of Melbourne, 2020

- Dean's Honours List, University of Melbourne, 2019

- Dean's List of Excellence in Academic Performance, University of Sydney, 2018 & 2017

Experience

Software Engineer at Melbourne eResearch Group, Melbourne Australia　　　　　Mar 2020 - July 2020
Develop a meeting diarisation Android app for research purposes. Key skills including Java programming, Git code management and the interaction with Google ML Speech API.

Student Intern at Beijing Institute of Technology, Beijing China　　　　　Nov 2019 - May 2020
Carry out research on domain adaptation and propose a novel simultaneous semantic alignment network. Key skills including DL algorithm design, Python programming and research paper writing (work published in ACM MM'20).

Research and Development Engineer at University of Melbourne, Melbourne Australia　　　Jul 2019 - Nov 2019
Develop an academia searching platform under the challenging data-scarce condition. Key skills including Python programming, NLP data processing and recommender system algorithm design.

Dalyell Scholar Program at University of Sydney, Sydney Australia　　　　　Mar 2018 - Jul 2018
Carry out research on Parkinson disease detection based on drawing patterns and develop an Android app for drawing data collection. Key skills including Java programming and database management.

Skills

Programming Skill: Python, Java, Matlab, SQL, R
Language Skill: English (IELTS Academic 7.0, live and study in Australia for 5 years), Mandarin Chinese (Native Speaker)