

# Jiashu Wu

Ph.D. Student, University of Chinese Academy of Sciences

DoB: 13<sup>th</sup> Jun 1997

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## EDUCATION

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**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

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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)

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

1. Heterogeneous Domain Adaptation for IoT Intrusion Detection: A Geometric Graph Alignment Approach  
**Jiashu Wu**, Hao Dai, Yang Wang<sup>✉</sup>, Kejiang Ye, Chengzhong Xu  
*IEEE Internet of Things Journal* (**IEEE IoTJ**, IF: 10.24), 2023
2. Cost-Efficient Sharing Algorithms for DNN Model Serving in Mobile Edge Networks  
Hao Dai, **Jiashu Wu**, Yang Wang<sup>✉</sup>, Jerome Yen, Yong Zhang, Chengzhong Xu  
*IEEE Transactions on Services Computing* (**IEEE TSC**, IF: 11.02), 2023
3. Joint Semantic Transfer Network for IoT Intrusion Detection  
**Jiashu Wu**, Yang Wang<sup>✉</sup>, Binhui Xie, Shuang Li, Hao Dai, Kejiang Ye, Chengzhong Xu  
*IEEE Internet of Things Journal* (**IEEE IoTJ**, IF: 10.24), 2022
4. PackCache: An Online Cost-driven Data Caching Algorithm in the Cloud  
**Jiashu Wu**, Hao Dai, Yang Wang<sup>✉</sup>, Yong Zhang, Dong Huang, Chengzhong Xu  
*IEEE Transactions on Computers* (**IEEE TC**, IF: 3.18), 2022
5. Towards Scalable and Efficient Deep-RL in Edge Computing : A Game-based Partition Approach  
Hao Dai, **Jiashu Wu**, Yang Wang<sup>✉</sup>, Chengzhong Xu  
*Journal of Parallel and Distributed Computing* (**JPDC**, IF: 4.54), 2022
6. Multi-Scenario Bimetric-Balanced IoT Resource Allocation: An Evolutionary Approach  
**Jiashu Wu**, Hao Dai, Yang Wang<sup>✉</sup>, Zhiying Tu  
*IEEE International Conference on High Performance Computing and Communications* (**IEEE HPCC**), 2022
7. Simultaneous Semantic Alignment Network for Heterogeneous Domain Adaptation  
Shuang Li, Binhui Xie, **Jiashu Wu**, Ying Zhao, Chi Harold Liu<sup>✉</sup>, Zhengming Ding  
*ACM Multimedia* (**ACM MM**, IS: 12.9), 2020, Seattle, Washing, USA

8. Adaptive Bi-Recommendation and Self-improving Network for Heterogeneous Domain Adaptation-assisted IoT Intrusion Detection  
**Jiashu Wu**, Yang Wang<sup>✉</sup>, Hao Dai, Chengzhong Xu, Kenneth B. Kent  
Under review at *IEEE Internet of Things Journal* (**IEEE IoTJ**, IF: 10.24), 2023
9. Open Set Dandelion Network for IoT Intrusion Detection  
**Jiashu Wu**, Hao Dai, Yang Wang<sup>✉</sup>, Kenneth B. Kent, Chengzhong Xu  
Under review at *ACM Transactions on Internet Technology* (**ACM TIOT**, 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

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- 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

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*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

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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)