



Jianke Yu 俞鉴珂, PhD

PhD (2026) in Graph Machine Learning & Databases

Hangzhou, China

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RESEARCH AREAS

Machine learning for graph-structured data and database systems: graph neural network architectures for incomplete, heterogeneous and temporal graphs (fraud detection, malware detection, graph similarity computation), and learning-based methods that accelerate database and data-mining algorithms.

Keywords: Graph Neural Networks, Graph Databases, AI for Databases, Fraud Detection, Knowledge Graphs

EDUCATION

PhD, Information Technology · University of Technology Sydney 2023.07 – 2026.09

Conferred 9 September 2026. Supervised by Prof. Ying Zhang, A/Prof. Lu Qin and Dr Hanchen Wang. Thesis: "Fraud detection on the customer-product bipartite graph" (learning-based algorithms for graph-structured data and database systems).

M.Eng, Electronic Information · Zhejiang Gongshang University 2020.09 – 2023.06

Supervised by Prof. Xiaoyang Wang. Research on graph representation learning, fraud detection and graph similarity computation.

B.Eng, Electronic Information Engineering · Zhejiang Gongshang University 2016.09 – 2020.06

APPOINTMENTS & EXPERIENCE

Research Intern · Token Foundry, Alibaba Token Hub, Alibaba Group 2025.12 – Present

Research on graph learning methods for industrial data systems.

Research Assistant · University of Technology Sydney 2023.07 – Present

ARC Discovery Project. Graph neural networks, graph similarity search and learning-based database algorithms.

Guest Lecturer · University of Technology Sydney 2025.07 – 2025.10

Guest lecturer for UTS 43023 Emerging Topics in AI (Spring session 2025: 28 July – 24 October; UTS "Spring session" runs in the second half of the year).

Research Intern · DAMO Academy / Alibaba Cloud, Alibaba Group 2022.07 – 2023.04

Fraud detection on e-commerce platforms (work later published in KDD 2023 and IEEE TKDE).

Research Intern · Taobao, Alibaba Group 2021.11 – 2022.03

Graph-based user modelling and risk analysis.

SELECTED PUBLICATIONS (FIRST-AUTHOR CCF-A)

Overall: 19 peer-reviewed papers (10 SCI journal papers, 5 in JCR Q1; 9 conference papers) — 7 CCF-A, 6 CCF-B, 4 CCF-C; 6 as first author; 119 citations.

- [1] MGDN: A Graph of Graphs Neural Network for Malware Detection. *IEEE Transactions on Knowledge and Data Engineering*, 2026. **1st author** **CCF-A** **CAS Zone 1 Top** **JCR Q1**
- [2] SARL: A Scalable Attribute-Informed Representation Learning Framework for Bipartite Graphs. *IEEE Transactions on Knowledge and Data Engineering*, 2026. **1st author** **CCF-A** **CAS Zone 1 Top** **JCR Q1**
- [3] Temporal Insights for Group-Based Fraud Detection on e-Commerce Platforms. *IEEE Transactions on Knowledge and Data Engineering*, 2024. **1st author** **CCF-A** **CAS Zone 1 Top** **JCR Q1**
- [4] Group-based Fraud Detection Network on e-Commerce Platforms. *ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, 2023. **1st author** **CCF-A**

| SCHOLARSHIPS & FUNDING

National Award for Outstanding Self-Financed Students Abroad (2025–2026) · China Scholarship Council	2026
National-level award for outstanding self-financed students abroad.	
UTS ARC Discovery Project Scholarship (Full Scholarship) · University of Technology Sydney / Australian Research Council	2023
UTS International Research Scholarship · University of Technology Sydney	2023

| HONORS & AWARDS

UTS FEIT HDR Excellence Award — Individual Category, Distinction · University of Technology Sydney, Faculty of Engineering and IT	2025
Faculty-level award (Distinction) for research excellence during HDR candidature.	
Excellent Practical Achievement Award for Professional Master Students · Education Department of Zhejiang Province	2022
Provincial award for outstanding professional master's practice achievements.	
Second Prize, 4th Zhejiang Province University Student Robotics Competition · Zhejiang Province	2019
Second Prize, "Internet+" Innovation and Entrepreneurship Competition · Zhejiang Gongshang University	2019

| ACADEMIC ACTIVITIES & SERVICE

Scalable Big Data Computation · Seminar, School of Data Science, The Chinese University of Hong Kong, Shenzhen 18 Apr 2026

Peer Reviewer · IEEE Transactions on Knowledge and Data Engineering (TKDE) 2025

Platform Administrator · Research Computing Platform, Prof. Ying Zhang & Prof. Xiaoyang Wang's Team, Zhejiang Gongshang University 2024–
Maintaining the group's GPU research computing platform (training and inference environments, accounts, resource scheduling).

| TEACHING

Guest Lecturer · 43023 Emerging Topics in Artificial Intelligence, University of Technology Sydney Spring 2025 (Jul–Oct)

Teaching Assistant · COMP9311 Database Systems, UNSW Sydney Term 3 2023

Teaching Assistant · DATA1001 Introduction to Data Science, UNSW Sydney
Term 2 2024, Term 2 2025