



Yilong Zang

Gender : Male

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🐙 GitHub

🏠 Homepage

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EDUCATION

•Bachelor of Science in Electronic and information engineering

Sep.2015 - Jul.2019

School of Information Science and Engineering, Wuhan University of Science and Technology

Wuhan, China

- Bachelor's thesis: Super-resolution Reconstruction of Images based on Convolutional Neural Networks (translated).
- Excellent graduation thesis award.

•Master of Science in Communication and Information System

Sep.2020 - Jul.2023

School of Computer Science, Wuhan University

Wuhan, China

- Rank 1st in the graduate entrance examination.
- Researched at National Engineering Research Center For Multimedia Software.
- Advisor: [Ruimin Hu](#), Co-advisor: [Zheng Wang](#).
- Research directions: fraud detection, graph neural network, social network.

TEACHING AND MENTORSHIP

•Undergraduate course: Advanced Language Programming

Feb.2022 - Jun.2022

Teaching Assistant

Wuhan, China

- Graded undergraduate programming assignments.
- Assisted students to team up to complete the term project (mainly C++).

•Undergraduate thesis guidance

Dec.2021 - May.2022

Mentor

Wuhan, China

- Guided 2 undergraduate students on literature research, programming, and thesis writing. The research direction is about social network.
- 1 of them got a grade of A+ (nearly 15%).

PROJECTS

•National Key R&D Program of China (Secret project)

Sep.2020 - Dec.2022

Student Participant

Wuhan, China

- **Function Implementation:** Designed a personalized influence metric for user role information based on the Pagerank model, implemented by JAVA.
- **Report Writing:** Worked with groups to complete report writing.

•State Key Program of National Natural Science Foundation of China

Sep.2020 - Mar.2022

Student Participant

Wuhan, China

- **Title:** Three-dimensional Spatial Identity Computing Theory and User Portrait and Location Technology. (translated)
- **Research Task:** Researched on how to find high-influential users in complex social networks.
- **Visualization:** Independently designed the visualization system for the research task, and statistical data, implemented by Vue(Javascript) + Django(Python).

•State Key Program of National Natural Science Foundation of China

Feb.2022 - Now

Student Participant

Wuhan, China

- **Title:** Key Technology Research on Natural Social Security Behavior Understanding and Intelligent Early Warning. (translated)
- **Research proposal writing:** Researched literature, proposed research content, and discussed the feasibility. Finally, we successfully applied for the grant.
- **Preliminary research:** Identified technical solutions, collected data sets, and designed pre-experiments to verify the feasibility of the ideas.

PUBLICATIONS

- [1] **Y. Zang**, R. Hu, Z. Wang, D. Xu, J. Wu, D. Li, J. Wu, L. Ren. Don't Ignore Alienation and Marginalization: Correlating Fraud Detection. In IJCAI 2023. accepted
- [2] **Y. Zang**, R. Hu, X. Li, Z. Wang, D. Li. User and Interaction both Matter: Social Relationship Mining via Interaction Graph Propagating. In 2023-IEEE International Conference on Communications (ICC), 2023, accepted.
- [3] J. Wu, R. Hu, D. Li, L. Ren, W. Hu, **Y. Zang**. IDGL: An Imbalanced Disassortative Graph Learning Framework for Fraud Detection. Service-Oriented Computing: 20th International Conference (ICSOC), 2022: 616-631.
- [4] J. Wu, R. Hu, D. Li, L. Ren, W. Hu, **Y. Zang**. A Bi-directional Category-Aware Multi-task Learning Framework for Missing Check-in POI Identification. Service-Oriented Computing: 20th International Conference (ICSOC), 2022: 584-599.
- [5] L. Ren, R. Hu, D. Li, J. Wu, **Y. Zang**, W. Hu. Cross-Regional Friendship Inference via Category-Aware Multi-Bipartite Graph Embedding. 2022 IEEE 47th Conference on Local Computer Networks (LCN). 2022: 73-80.
- [6] D. Li, L. Zeng, R. Hu, J. Huang, X. Liang, **Y. Zang**. Dynamic Behavior Pattern: Mining the Fraudsters in Telecom Network. 2022 IEEE 23rd Int Conf on High Performance Computing & Communications (HPCC). 2022.
- [7] D. Li, L. Zeng, R. Hu, X. Liang, **Y. Zang**. ITC: Influential-Truss Community Search. 2022 International Joint Conference on Neural Networks (IJCNN). 2022: 01-08.

Papers under review

- 1) **Y. Zang**, R. Hu, X. Li, Z. Wang, D. Li, J. Wu, L. Ren. PRM-GNN: A Graph Neural Network based Framework to Mine Power Relationships via User Interaction Correlation. IEEE Transaction on Computational Social Systems. under review.
- 2) L. Ren, R. Hu, D. Li, Y. Liu, J. Wu, **Y. Zang**, W. Hu. Improving Fraud Detection via Imbalanced Graph Structure Learning. Machine Learning. under review
- 3) L. Ren, R. Hu, D. Li, Y. Liu, J. Wu, **Y. Zang**, W. Hu. Dynamic Graph Neural Network-based Fraud Detectors against Collaborative Fraudsters. Knowledge-Based Systems (KBS). under review.
- 4) L. Ren, R. Hu, D. Li, J. Wu, **Y. Zang**. AceFraud: Aggregation Architecture Searcher for Fraud Detection. 52nd International Conference on Parallel Processing (ICPP 2023). under review.

Patents

- 1) A social relationship mining method based on interaction graph propagation (first student inventor) - China Patent - CN202210422953.1 - 2022 Acceptance
- 2) Fraud detection method and device based on correlation fraud awareness (first student inventor) - China Patent - CN202310244679.8 - 2023 Acceptance
- 3) A method and system for location place prediction for missing POI (co-inventor) - China Patent - CN202211033841.3 - 2022 Acceptance
- 4) Missing POI identification method (co-inventor) - China Patent - CN202210601769.3 - 2022 Acceptance

TECHNICAL SKILLS AND INTERESTS

Languages: IELTS Overall 6.5, Writing 7, Reading 7, Listening 6, Speaking 6.

Programming language: Python (master), L^AT_EX(master), Javascript, C++.

Frameworks: Pytorch, Pytorch geometric, DGL, Networkx, Sklearn.

Soft kits: Jupyter notebook, Pycharm, Overleaf, Powerpoint.

Cloud/Databases: Github, OneDrive, Google Drive&Colab.

Amateur interest: Swimming, Fitness, Skiing (beginner).

POSITIONS OF RESPONSIBILITY

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| •Student member. IEEE. | <i>Feb.2023 - Feb.2024</i> |
| •Student member. IEEE Communications Society. | <i>Feb.2023 - Feb.2024</i> |

ACHIEVEMENTS

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| •Scholarship. Wuhan University Postgraduate Scholarship. | <i>2020-2023</i> |
| •Third prize. Wuhan University 8th “Internet+” Innovation and Entrepreneurship Competition.
– Title: Anti-telecom Fraud Big Data Platform Based on Edge-Cloud Collaboration. (translated) | <i>2022</i> |