



## Yilong Zang

Gender : Male

Nationality : China

Date of Birth : 14 October 1997

Marital Status: Unmarried

+86-13006361916

✉ zangyl@whu.edu.cn

🐙 GitHub

🏠 Homepage

🔍 Google scholar

## 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 data mining, graph neural network, social network.
- Master's thesis: Telecom Fraud Detection based on User Social Interaction Analysis (translated, under review).

## TEACHING AND MENTORSHIP

---

### •Undergraduate course: Advanced Language Programming

Feb.2021 - Jun.2021

Teaching Assistant

Wuhan, China

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

### •Undergraduate thesis guidance

Dec.2020 - May.2021

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.
- **Visualization:** Independently designed the visualization system for the research task, and statistical data, implemented by Vue(Javascript) + Django(Python).
- **Report Writing:** Worked with groups to complete report writing.

### •Joint project 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.

### •Joint project of National Natural Science Foundation of China

Feb.2022 - June.2023

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. (acceptance rate 15%)
- [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. Hu, R. Hu, Z. Wang, D. Li, J. Wu, L. Ren, **Y. Zang**, et al. Collaborative Fraud Detection: How Collaboration Impacts Fraud Detection. ACM International Conference on Multimedia (ACM MM), 2023, accepted.
- [4] L. Ren, R. Hu, D. Li, Y. Liu, J. Wu, **Y. Zang**, et al. Dynamic graph neural network-based fraud detectors against collaborative fraudsters. Knowledge-Based Systems, 2023.
- [5] 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.
- [6] 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.
- [7] 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.
- [8] 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.
- [9] 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. Power on Graph: Mining Power Relationships via User Interaction Correlation. IEEE Transaction on Computational Social Systems.
- 2) X. Gao, T. Chen, **Y. Zang**, W. Zhang, Q. V. H. Nguyen, K. Zheng, H. Ying. Graph Condensation for Inductive Node Representation Learning. IEEE International Conference on Data Engineering.
- 3) L. Ren, R. Hu, J. Wu, D. Li, **Y. Zang**, et al. KD-GNN: Knowledge Distillation-enhanced Graph Neural Network for Graph Anomaly Detection with Incomplete Attributes. Thirty-Eighth AAAI Conference on Artificial Intelligence.
- 4) J. Wu, R. Hu, L. Ren, D. Li, Z. Huang, **Y. Zang**, et al. NRGL: Studying A Label Noise-Resistant Graph Learning Framework for Anomaly Detection When Meeting Heterophily. Thirty-Eighth AAAI Conference on Artificial Intelligence.
- 5) 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 major revisions.

## 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<sup>A</sup>T<sub>E</sub>X(master), Javascript, C++.

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

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

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

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

## POSITIONS OF RESPONSIBILITY

---

- Student member.** IEEE. Feb.2023 - Feb.2024
- Student member.** IEEE Communications Society. Feb.2023 - Feb.2024

## ACHIEVEMENTS

---

- Scholarship.** Wuhan University Postgraduate Scholarship. 2020-2023
- Third prize.** Wuhan University 8th "Internet+" Innovation and Entrepreneurship Competition. 2022  
– **Title:** Anti-telecom Fraud Big Data Platform Based on Edge-Cloud Collaboration. (translated)