Yilong Zang

Gender : Male
Nationality : China
Date of Birth : 14 Oct. 1997
Martial Status: Unmarried

+86-13006361916
zyl469608745@gmail.com
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 Univerity 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).

Employment

•Research Assistant *Oct.2023 - now*

German Research Center for Artificial Intelligence (DFKI) Remote

– Advisor: Prof. Sebastian Vollmer
– Research group: Data Science and its Applications (DSA).
– Research directions: **Biomedical/Geographic graph data mining.**

Teaching and Reviewing

•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%).

•Journal of Neural Computing & Applications *Oct.2023 - Dec.2023*

Reviewer Online

Projects

•curATime: Atherothrombosis cluster and individuolized medicine *Oct.2023 - now*

Project Collaborator Remote

– Contributed to design deep learning models for multi-omics data.
– Participated in regular meetings and discussions with the project team.

•Eventful: timely models for individual & societal health *Oct.2023 - now*

Project Collaborator Remote

– Shared available social science research content and methods.
– Investigated the latest research on event detection.

•National Key R&D Program of China *Sep.2020 - Dec.2022*

Student Participant Wuhan, China

– **Programming.** Designed a personalized influence metric for user role information based on the Pagerank model, implemented by JAVA; **Visualization.** Designed the visualization system implemented by Vue(Javascript) + Django(Python); **Writting.** 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. **Outputs.** One conference paper[2].

•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. **Outputs.** One conference paper[1].

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. 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. IEEE International Conference on Communications (ICC), 2023.

[3] 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 (ICDE), 2024.

[4] 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.

[5] 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 (KBS), 2023.

[6] 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.

[7] 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.

[8] L. Ren, R. Hu, D. Li, Y. Liu, J. Wu, **Y. Zang**, et al. Improving Fraud Detection via Imbalanced Graph Structure Learning. Machine Learning.

[9] L. Ren, R. Hu, D. Li, J. Wu, **Y. Zang**, et al. Cross-Regional Friendship Inference via Category-Aware Multi-Bipartite Graph Embedding. IEEE 47th Conference on Local Computer Networks (LCN), 2022.

[10] D. Li, L. Zeng, R. Hu, J. Huang, X. Liang, **Y. Zang**. Dynamic Behavior Pattern: Mining the Fraudsters in Telecom Network. IEEE 23rd Int Conf on High Performance Computing & Communications (HPCC), 2022.

[11] D. Li, L. Zeng, R. Hu, X. Liang, **Y. Zang**. ITC: Influential-Truss Community Search. International Joint Conference on Neural Networks (IJCNN), 2022.

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.

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), LaTeX(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

•**Competition.** Wuhan University 8th "Internet+" Innovation and Entrepreneurship Competition. *2022*
- 3rd prize.
- **Title:** Anti-telecom Fraud Big Data Platform Based on Edge-Cloud Collaboration. (translated)

•**Scholarship.** Wuhan University Graduate Student Academic Innovation Award. *2023*
- 2nd prize (15 in School of CS).

•**Competition.** China Mobiles Wutong Cup Big Data Innovation Competition . *2023*
- 2nd prize/place (Data Application Track). (China Daily Newspaper, Sina News)
- Presenter