Yilong Zang

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

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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 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.

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 *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

– **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

– **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, X. Li, Z. Wang, D. Li. User and Interaction both Matter: Social Relationship Mining via Interaction Graph Propagating. In ICC 2023-IEEE International Conference on Communications (ICC), 2023, Accepted.

[2] 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.

[3] 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.

[4] 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.

[5] 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.

[6] 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, Z. Wang, D. Xu, J. Wu, D. Li, J. Wu, L. Ren. Don't Ignore Alienation and Marginalization: Correlating Fraud Detection. In IJCAI 2023. under 2nd round review.
2) **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. Neural Computing and Applications (NCAA). 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. 2023 20th International Conference on Knowledge Representation and Reasoning (KR). 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), LaTeX(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

•**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.** China College Students "Internet+" Innovation and Entrepreneurship Competition. *2022*