

ZIRUI YUAN

✉ yzr2234@gmail.com · ☎ (+86) 186-9266-6305 · 🌐 <https://zirui-yuan.github.io/>

EDUCATION

Tianjin University, Tianjin, China Sept. 2021 – Mar. 2024 (Expected)

Master of Computer Technology, supervised by Prof. Minglai Shao

GPA: 83%

Thesis: "Research on Influence Maximization Methods for Complex Information Propagation Scenarios"

Dalian Maritime University, Dalian, China Sept. 2017 – Jun. 2021

B.E. in Electronic Information Science and Technology

Rank: 5 / 88 GPA: 88%

PUBLICATION

- **Zirui Yuan**, Minglai Shao, Qiben Yan. Motif-level Anomaly Detection in Dynamic Graphs. *IEEE Transactions on Information Forensics Security (TIFS)*, 2023.
- **Zirui Yuan**, Minglai Shao, Zhiqian Chen. Graph Bayesian Optimization for Multiplex Influence Maximization. *The 38th Annual AAI Conference on Artificial Intelligence (AAAI)*, 2024.

RESEARCH EXPERIENCE

Anomaly Detection in Dynamic Graphs Nov. 2021 – Jun. 2022

- Introduced Motif-level Anomaly Detection in dynamic graphs for identifying anomalies that mimic common patterns.
- Devised an efficient framework that integrates local topological and temporal features.
- Validated the framework on real-world dynamic graph datasets, showcasing its efficacy.
- Published a paper as the first author in a top cybersecurity journal, TIFS 2023.

Multiplex Influence Maximization Sept. 2022 – Aug. 2023

- Designed a Multiplex Information Diffusion Model that takes into account the processes of multiple information items and their interactions.
- Developed Graph Bayesian Optimization framework incorporating graph neural networks and Bayesian regression for efficient optimization.
- Conducted extensive experiments to validate its efficiency.
- One first-authored paper was accepted by a top-tier AI conference, AAI 2024.

HONORS AND AWARDS

- *2nd Prize*, Scholarship of Tianjin University Sept. 2022 & Sept. 2023
- *1st Prize*, Scholarship of Tianjin University Sept. 2021
- Outstanding Graduate of Dalian Jun. 2021
- *1st Prize*, American Undergraduate Mathematical Contest in Modeling (Top **10%**) Jan. 2019
- *1st Prize*, Scholarship of Dalian Maritime University (continued 3 years) Sept. 2018 - Jun. 2021

SKILLS

- Programming Languages: C/C++, Python, Shell, Matlab, Java
- Languages: English (IELTS 7.0), Chinese (Native)

REFEREES

- **Minglai Shao**, Tenured Associate Professor of Tianjin University, China, Email: shaoml@tju.edu.cn
- **Zhiqian Chen**, Assistant Professor of Mississippi State University, USA, Email: zchen@cse.msstate.edu