Xueqi Cheng

| xueqi.cheng@vanderbilt.edu | https://xueqic.github.io/ |

SUMMARY OF QUALIFICATION

In-depth knowledge and research experience in geometric deep learning and social network analysis, with a keen interest in **deep learning on complex graphs**, **out-of-distribution generalization**, and **imbalanced learning on graphs**.

EDUCATION

Vanderbilt University Nashville, TN
Ph.D. in Computer Science *Aug. 2021 – present*

University of Michigan Ann Arbor, MI
M.S.E. in Civil Engineering (Structures) *Aug. 2018 – Dec. 2019*

Southwest Jiaotong University (SWJTU) Chengdu, China
B.S. in Civil Engineering (Bridge Engineering) *Sep. 2014 – Jul. 2018*

RESEARCH EXPERIENCES

Network and Data Science (NDS) Lab May. 2023 – present
Ph.D. student, Computer Science Department *Vanderbilt University*
- Research topics: Deep learning on complex graphs, out of distribution generalization, and imbalanced learning on graphs
- Advisor: Dr. Tyler Derr

Baroud Research Group (BRG) Aug. 2021 – May. 2023
Ph.D. student, Civil and Environmental Engineering Department *Vanderbilt University*
- Research topics: Machine learning, network modeling, resilience assessment
- Advisor: Dr. Hiba Baroud

Resilient and Efficient Structures Laboratory (RESLab) Jan. 2019 – Dec. 2019
M.S. student, Department of Civil and Environmental Engineering *University of Michigan, Ann Arbor*
- Research topics: Performance-based wind engineering
- Advisor: Dr. Seymour M.J. Spence

EMPLOYMENT

Southwest Jiaotong University Chengdu Design Institute Co., Ltd. Jul. 2016 – Aug. 2016
Research Engineer Intern, Team of Bridge Design *Chengdu, China*
- Research topics: VR technology, bridge conceptual design
- Advisor: Dr. Wei He

SELECTED PUBLICATIONS

1. Wang, Yu, Tong Zhao, Yuying Zhao, Yunchao Liu, **Xueqi Cheng**, Neil Shah, and Tyler Derr. "A Topological Perspective on Demystifying GNN-Based Link Prediction Performance." arXiv preprint arXiv:2310.04612 (2023).

2. Zhang, Yi, Yuying Zhao, Zhaoqing Li, **Xueqi Cheng**, Yu Wang, Olivera Kotevska, Philip S. Yu, and Tyler Derr. "A Survey on Privacy in Graph Neural Networks: Attacks, Preservation, and Applications." arXiv preprint arXiv:2308.16375 (2023).

3. Zhao, Yuying, Yu Wang, Yunchao Liu, **Xueqi Cheng**, Charu Aggarwal, and Tyler Derr. "Fairness and Diversity in Recommender Systems: A Survey." arXiv preprint arXiv:2307.04644 (2023).

4. **Cheng, Xueqi**, Yan Zhang, Sining Lu, Yinqiao Zhu, and Wei He. "Urban Bridge Conceptual Design Based on Virtual Reality Graphic Engine." In *IABSE Symposium Report*, vol. 108, no. 1, pp. 74-75. International Association for Bridge and Structural Engineering, 2017.

Symposiums and Workshops

1. **Cheng, Xueqi**. Urban Bridge Conceptual Design Based on Virtual Reality Graphic Engine. International Association for Bridge and Structural Engineering (IABSE) Symposium, presentation, 2017.

Scholarships and Awards

- Engineering Graduate Fellowship from Vanderbilt University   2023 - present
- IBM Ph.D. Fellowship from Vanderbilt University   2021 - present
- National Encouragement Scholarship   2015, 2016
- Merit Student of SWJTU   2015, 2016
- Best Debater in Freshman Debate Competition held by the School of Civil Engineering, SWJTU   2014

Guest Lectures

- **Intro to PyTorch and PyG**
  CS 4352/5352: Social Network Analysis at Vanderbilt University, Oct. 2023

Academic Services

- **Organizer**
  - Publicity Chair: The 5th International Workshop on Machine Learning on Graphs (MLoG) at WSDM'24
- **Program Committee**
  - IEEE BigData: The 7th Workshop on Graph Techniques for Adversarial Activity Analytics (CTA3'23)
- **Reviewer/ Sub Reviewer**   ICWSM'24, WSDM'24, AAAI'24, WWW'24, SDM'24, GTA3'24, TKDD'24

Extracurricular Activities

- **President**, University Student Entrepreneurship Incubation Association of SWJTU   Jun. 2016 – May. 2017
- **Volunteer Teacher**, Tuoxin Primary School, Anhui, China   Jun. 2015 – Aug. 2015

Teaching

- **TA** for CS 4352/5352: Social Network Analysis at Vanderbilt University   Aug. 2023 – Dec. 2023
- **TA** for CE 2200: Statics at Vanderbilt University   Jan. 2023 – May. 2023
- **TA** for CE 3205: Structural Design at Vanderbilt University   Jan. 2022 – May. 2022
- **TA** for CE 3200: Structural Analysis at Vanderbilt University   Aug. 2021 – Dec. 2021