

EDUCATION

University of Southern California

Ph.D. Candidate in Computer Science, GPA: 4.0/4.0, Advisor: Yan Liu

Los Angeles, CA, United States

2019–Current

Peking University

B.S. in Computer Science and Technology, GPA: 3.7/4.0, Advisor: Guojie Song

Beijing, China

2015–2019

- Graduate with Summa Cum Laude
- Top 10 Undergraduate Thesis in the School of EECS
- Research at Montreal Institute for Learning Algorithms (MILA) in Summer 2018, advised by Prof. Jian Tang

RESEARCH INTERESTS

My research interests mainly lie on the interdisciplinary fields bridging advanced **Foundation Models** (such as **Large Language Models** and **Vision Transformer**) with **Time Series Analysis**, **Social Media Analysis**, **Causal Inference**, and **Graph-Structured Data**. To this end, I have been focusing on both developing novel foundation models for variant scenarios as well as adapting existing foundation models of language and vision on other data modality. Notably, my proposed algorithms and models have shown substantial capacity in applications on **Time Series Forecasting**, **Misinformation Campaign Detection** and **Counterfactual Analysis on User Behaviors**.

INTERNSHIP EXPERIENCE

Microsoft Research, Asia

Research Intern

Beijing, China

June 2023 - August 2023

- Work on Causal Inference and Large Language Models.
- Publication is in preparation.

NEC Laboratories America

Research Intern

Princeton, New Jersey, United States

May 2022 - August 2022

- Work on Meta-Learning and Few-Shot Learning for data from multiple domains or clusters.
- Paper published on NeurIPS 2023.

TUTORIALS

1. [**TheWebConf 2024**] **Yizhou Zhang**, Karishma Sharma, Lun Du and Yan Liu “Toward Mitigating Misinformation and Social Media Manipulation in Large Language Model Era”, *The Web Conference 2024*.
2. [**IJCAI 2024**] **Yizhou Zhang**, Lun Du and Yan Liu “Toward Mitigating Misinformation and Social Media Manipulation in Foundation Model Era”, *International Joint Conference on Artificial Intelligence 2024*.

PREPRINTS

1. [**Topic: LLM for Misinformation**] **Yizhou Zhang**, Loc Trinh, Defu Cao, Zijun Cui and Yan Liu, “Interpretable Detection of Out-of-Context Misinformation with Neural-Symbolic-Enhanced Large Multi-modal Model”. arXiv preprint arXiv:2304.07633

2. [**Topic: Advanced LLM Prompting**] **Yizhou Zhang**, Lun Du, Defu Cao, Qiang Fu and Yan Liu, “Guiding Large Language Models with Divide-and-Conquer Program for Discerning Problem Solving”. arXiv preprint arXiv:2402.05359

CONFERENCE PUBLICATIONS

1. [**NeurIPS 2023**] **Yizhou Zhang**, Jingchao Ni, Wei Cheng, Zhengzhang Chen, Liang Tong, Haifeng Chen and Yan Liu “Hierarchical Gaussian Mixture based Task Generative Model for Robust Meta-Learning”, *Advances in Neural Information Processing Systems, 2023*.
2. [**ECIR 2023**] **Yizhou Zhang**, Karishma Sharma and Yan Liu “Capturing Cross-Platform Interaction for Identifying Coordinated Accounts of Misinformation Campaigns”, *European Conference on Information Retrieval, 2023*.
3. [**NeurIPS 2022**] **Yizhou Zhang***, Defu Cao* and Yan Liu “Counterfactual Neural Temporal Point Process for Estimating Causal Influence of Misinformation on Social Media”, *Advances in Neural Information Processing Systems, 2022*. (* Equal Contribution)
4. [**ICPR 2022**] **Yizhou Zhang**, Zhaoheng Zheng, Ram Nevatia and Yan Liu “Improving Weakly Supervised Scene Graph Parsing through Object Grounding”, in *Proceedings of the 27th International Conference on Pattern Recognition, 2022*.
5. [**ICWSM 2022**] Karishma Sharma, **Yizhou Zhang** and Yan Liu “COVID-19 Vaccine Misinformation Campaigns and Social Media Narratives”, *Proceedings of the 15th International AAAI Conference on Web and Social Media, 2022*.
6. [**NeurIPS 2021**] **Yizhou Zhang***, Karishma Sharma* and Yan Liu “VigDet: Knowledge Informed Neural Temporal Point Process for Coordination Detection on Social Media”, *Advances in Neural Information Processing Systems, 2021*. (* Equal Contribution)
7. [**KDD 2021**] Karishma Sharma*, **Yizhou Zhang***, Emilio Ferrara and Yan Liu “Identifying Coordinated Accounts on Social Media through Hidden Influence and Group Behaviours”, *Proceedings of the 27th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, 2021*. (* Equal Contribution)
8. [**TheWebConf 2020**] Lichen Jin, **Yizhou Zhang**, Guojie Song and Yilun Jin “Active Domain Transfer on Network Embedding”, *Proceedings of The Web Conference 2020*.
9. [**IJCAI 2019**] **Yizhou Zhang**, Guojie Song, Lun Du, Shuwen Yang and Yilun Jin “DANE: Domain Adaptive Network Embedding”, *Proceedings of the 28th International Joint Conference on Artificial Intelligence, 2019*.
10. [**ICDM 2018**] **Yizhou Zhang**, Xiaojun Ma and Guojie Song “Chinese Medical Concept Normalization by Using Text and Comorbidity Network Embedding”, *IEEE International Conference on Data Mining, 2018*.

JOURNAL PUBLICATIONS

1. [**JHIR 2021**] Nitin Kamra, **Yizhou Zhang**, Sirisha Rambhatla, Chuizheng Meng, and Yan Liu “PolSIRD: Modeling Epidemic Spread Under Intervention Policies”, *Journal of Healthcare Informatics Research, 2021*.
2. [**TBD 2020**] Guojie Song, **Yizhou Zhang**, Lingjun Xu and Haibing Lu “Domain Adaptive Network Embedding”, *IEEE Transactions on Big Data, 2020*.

ACADEMIC SERVICES

- **Organizing Experience:** Session Chair of AAAI 2023 (in the sessions of Graph-based Machine Learning and Time-Series/Data Streams)
- **Review Experience:**
 - Senior Program Committee (Meta-Reviewer): AAAI 2023

– Reviewer/Program Committee: IJCAI 2021, NeurIPS 2021, ICML 2022, NeurIPS 2022, SDM 2023, KDD 2023, ICML 2023, NeurIPS 2023, EMNLP 2023, ICLR 2024, ICML 2024, KDD 2024

SKILLS

- **Machine Learning Frameworks:** PyTorch, TensorFlow, Scikit-Learn
- **Programming Languages:** Python (Proficient), C&C++ (Proficient), Java (with coding experience) and R (with coding experience)
- **Programming Abilities:** Sufficient experience and knowledge of programming on Linux

LANGUAGES

- **Chinese (Mandarin):** Mother Language
- **English:** Fluent

SELECTED AWARDS

- Annenberg Fellowship, USC
- Top 10 Undergraduate Thesis in the School of EECS, Peking University