Lecheng Zheng

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EDUCATION

University of Illinois at Urbana-Champaign, Champaign, Illinois, USA

Aug 2019 - Present

- PhD in Computer Science
- Advisor: Jingrui He

Arizona State University, Tempe, Arizona, USA

Aug 2017 - May 2019

- PhD in Computer Science
- Advisor: Jingrui He

University of Kansas, Lawrence, Kansas, USA

Aug 2012 - Dec 2016

- Bachelor of Computer Science
- Advisor: Jun (Luke) Huan

RESEARCH AND INDUSTRY EXPERIENCE

iSAIL Lab, University of Illinois at Urbana-Champaign, Champaign, USA

Aug 2019 - Present

- Research Assistant
 - Research on heterogeneous machine learning, self-supervised learning, graph mining
 - · Advisor: Prof. Jingrui He

NEC laboratories America, New Jersey, USA

May 2023 – Aug 2023

- Research Intern
 - · Research on multi-modality learning, root cause analysis
 - Advisor: Dr. Zhengzhang Chen

STAR Lab, Arizona State University, Champaign, USA

Aug 2017 - Aug 2019

- Research Assistant
 - Research on heterogeneous machine learning, graph mining
 - Advisor: Prof. Jingrui He

PUBLICATIONS

Conference Papers

- 1.**Lecheng Zheng**, John Birge, Haiyue Wu, Yifang Zhang, Jingrui He. Cluster Aware Graph Anomaly Detection. The Web Conference 2025 (WWW-2025 Oral Presentation).
- 2.Mengfei Lan, **Lecheng Zheng**, Shufan Ming, Halil Kilicoglu. Multi-label Sequential Sentence Classification via Large Language Model. The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP-2024).
- 3.Lecheng Zheng, Baoyu Jing, Zihao Li, Hanghang Tong, Jingrui He. Heterogeneous Contrastive Learning for Foundation Models and Beyond. ACM: SIGKDD Conference on Knowledge Discovery and Data Mining (KDD-2024).
- 4.**Lecheng Zheng**, Zhengzhang Chen, Jingrui He, Haifeng Chen. MULAN: Multi-modal Causal Structure Learning and Root Cause Analysis for Microservice Systems. The Web Conference 2024 (WWW-2024 Oral Presentation).
- 5.**Lecheng Zheng**, Dawei Zhou, Hanghang Tong, Jiejun Xu, Yada Zhu, Jingrui He. FairGen: Towards Fair Graph Generation. IEEE International Conference on Data Engineering (ICDE-2024).
- 6.**Lecheng Zheng**, Yada Zhu, Jingrui He. Fairness-aware Multi-view Clustering. SIAM: SIAM International Conference on Data Mining (SDM-2023).
- 7.Dawei Zhou*, **Lecheng Zheng***, Dongqi Fu, Jiawei Han, Jingrui He. MentorGNN: Deriving Curriculum for Pre-Training GNNs. ACM International Conference on Information and Knowledge Management (CIKM-2022). (*: Equal contribution).
- 8.**Lecheng Zheng**, Jinjun Xiong, Yada Zhu, Jingrui He. Contrastive Learning with complex heterogeneity. ACM: SIGKDD Conference on Knowledge Discovery and Data Mining (KDD-2022).
- 9.Lecheng Zheng, Yu Cheng, Hongxia Yang, Nan Cao, Jingrui He. Deep Co-Attention Network for Multi-View Subspace Learning. The Web Conference 2021 (WWW-2021).
- 10. Jianbo Li, **Lecheng Zheng**, Yada Zhu, and Jingrui He. Outlier Impact Characterization for Time Series Data, The Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI-2021).

- 11. Dawei Zhou, **Lecheng Zheng**, Jiawei Han, Jingrui He. A Data-driven Graph Generative Model for Temporal Interaction Networks. ACM: SIGKDD Conference on Knowledge Discovery and Data Mining (KDD-2020).
- 12. Dawei Zhou, **Lecheng Zheng**, Jianbo Li, Yada Zhu, Jingrui He. Domain Adaptive Multi-Modality Neural Attention Network for Financial Forecasting. The Web Conference 2020 (WWW-2020).
- 13.**Lecheng Zheng**, Yu Cheng, Jingrui He. Deep Multimodality Model for Multi-task Multi-view Learning, SIAM: SIAM International Conference on Data Mining 2019 (SDM-2019).

Journal Papers

- 1.**Lecheng Zheng***, Dongqi Fu*, Ross Maciejewski, Jingrui He. DrGNN: Deep Residual Graph Neural Network with Contrastive Learning. TMLR, 2024. (*: Equal contribution).
- 2.Dawei Zhou*, **Lecheng Zheng***, Jiejun Xu, Jingrui He. Misc-GAN: A Multi-Scale Generative Model for Graphs. Frontier, 2019. (*: Equal contribution).

Preprint Papers

- 1.**Lecheng Zheng**, Zhengzhang Chen, Haifeng Chen, Jingrui He. Online Multi-modal Root Cause Analysis. arXiv preprint.
- 2.Ziwei Wu*, **Lecheng Zheng***, Yuancheng Yu, Ruizhong Qiu, John Birge, Jingrui He. Fair Anomaly Detection For Imbalanced Groups. arXiv preprint.
- 3.**Lecheng Zheng**, John R Birge, Yifang Zhang, Jingrui He. Towards Multi-view Graph Anomaly Detection with Similarity-Guided Contrastive Clustering. arXiv preprint.
- 4.**Lecheng Zheng**, Zhengzhang Chen, Dongjie Wang, Chengyuan Deng, Reon Matsuoka, and Haifeng Chen. LEMMA-RCA: A Large Multi-modal Multi-domain Dataset for Root Cause Analysis. arXiv preprint.

GUEST LECTURE

University of Rochester

Dec 2024

Heterogeneous Machine Learning

Virginia Tech

Apr 2022

• Contrastive Learning: A Heterogeneous Perspective

INVITED TALK

Virginia Tech

Jan 2025

• Heterogeneous Machine Learning: Characterization, Generation and Comprehension

NEC Laboratories America

Dec 2024

• Heterogeneous Machine Learning: Characterization, Generation and Comprehension

Clemson University

Feb 2024

• Understanding Heterogeneous Machine Learning: Characterization, Generation and Comprehension

Tufts University

Aug 2021

• Generative Model for Static and Dynamic Graphs

TEACHING EXPERIENCE

■ Teaching Assistant

Jan 2022 – May 2022

- CS 412 Data Mining
- Prof. Hanghang Tong

Jan 2022

- 2 hours lecture at Winter Camp by School of Information Science at UIUC
- Topic: Exploring Rare Categories on Graphs: Representation, Inference, and Generalization

TUTORIAL EXPERIENCE

KDD Tutorial

SDM Tutorial

Lecturer

Aug 2024

Apr 2023

• Topic: Heterogeneous Contrastive Learning for Foundation Models and Beyond

Topic: Contrastive Learning: A Heterogeneous Perspective

■ IJCAI Tutorial Jan 2021

• Topic: Exploring Rare Categories on Graphs: Representation, Inference, and Generalization

GRANT EXPERIENCE

- Participate in proposal writing for the project at IBM-Illinois Discovery Accelerator Institute: "Climate Runtime: Programming Fabric for Geospatial Representation, Fusion and Federation" (PI: Prof. Jingrui He, Co-PI: Prof. Hanghang Tong, Prof. Lisa Ainsworth, \$1,248,476)
- Participate in proposal writing for the project at IBM-Illinois Discovery Accelerator Institute: "Deep Climate Anomaly Modeling and Impact Analysis" (PI: Prof. Jingrui He, Co-PI: Prof. Hanghang Tong, \$75,000).
- Participate in proposal writing for the project at C3.AI: "Multi-Facet Rare Event Modeling of Adaptive Insider Threats" (PI: Prof. Jingrui He, CO-PI: Prof. John Birge, \$200,000)

ACADEMIC AWARDS

 UIUC CS PhD Fellowship 	2023
■ SDM Student Travel Award	2023
■ CIKM Student Travel Award	2022
■ WWW Student Travel Award	2021
■ KDD Student Registration Award	2021
■ KDD Student Registration Award	2020

SERVICE

■ PROGRAM COMMITTEE IN CONFERENCES

	I.Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)	2025
2	2.The 28th International Conference on Artificial Intelligence and Statistics (AISTATS)	2025
ć	3.The ACM Web Conference (TheWebConf)	2025
4	4.The Thirteenth International Conference on Learning Representations (ICLR)	2025
Į	5.The 39th AAAI Conference on Artificial Intelligence (AAAI)	2025
(6.The 18th ACM International Conference on Web Search and Data Mining (WSDM)	2025
•	7.SIAM International Conference on Data Mining (SDM)	2025
8	3.2024 IEEE International Conference on Big Data (BigData)	2024
9	O.The 33rd ACM International Conference on Information and Knowledge Management (CIKM)	2024
10	O.The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP)	2024
1	I.Thirty-Eighth Annual Conference on Neural Information Processing Systems (NeurIPS)	2024
12	2. Forty-first International Conference on Machine Learning (ICML)	2024
13	3.The 33rd International Joint Conference on Artificial Intelligence (IJCAI)	2024
14	4.Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)	2024
15	5.The ACM Web Conference (TheWebConf)	2024
10	6.The Twelfth International Conference on Learning Representations (ICLR)	2024
1	7.The 17th ACM International Conference on Web Search and Data Mining (WSDM)	2024
18	3.SIAM International Conference on Data Mining (SDM)	2024
19	9.2023 IEEE International Conference on Big Data (BigData)	2023
20	D.The 32nd ACM International Conference on Information and Knowledge Management (CIKM)	2023
2	1.Thirty-seventh Annual Conference on Neural Information Processing Systems (NeurIPS)	2023
22	2.The 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)	2023
23	3.The 32nd International Joint Conference on Artificial Intelligence (IJCAI)	2023
24	4.The ACM Web Conference (TheWebConf)	2023
25	5.SIAM International Conference on Data Mining (SDM)	2023
20	5.Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI)	2023
2	7.The 16th ACM International Conference on Web Search and Data Mining (WSDM)	2023
28	3.The 31st ACM International Conference on Information and Knowledge Management (CIKM)	2022
29	7. The 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)	2022
30	O.The 31st International Joint Conference on Artificial Intelligence (IJCAI)	2022

	31.The ACM Web Conference (TheWebConf)	2022
	32.Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI)	2022
	33.SIAM International Conference on Data Mining (SDM)	2022
	34.The 30th ACM International Conference on Information and Knowledge Management (CIKM)	2021
	35.The 30th International Joint Conference on Artificial Intelligence (IJCAI)	2021
	36.Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI)	2021
	37.2020 IEEE International Conference on Big Data (BigData)	2020
	38.2019 IEEE International Conference on Big Data (BigData)	2019
	39.2018 IEEE International Conference on Big Data (BigData)	2018
•	EXTERNAL REVIEWER	
	1.Conference on Computer Vision and Pattern Recognition	2023
	2.The Eleventh International Conference on Learning Representations (ICLR)	2023
	3. The 45th ACM Conference on Research and Development in Information Retrieval (SIGIR)	2022
	4.Thirty-sixth Annual Conference on Neural Information Processing Systems (NeurIPS)	2022
	5. The Tenth International Conference on Learning Representations (ICLR)	2022
	6.Thirty-fifth Annual Conference on Neural Information Processing Systems (NeurIPS)	2021
	7. The 9th International Conference on Learning Representations (ICLR)	2021
	8.The ACM Web Conference (TheWebConf)	2021
	9.The 44th ACM Conference on Research and Development in Information Retrieval (SIGIR)	2021
	10.The Thirty-eighth International Conference on Machine Learning (ICML)	2021
	11.The 27th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)	2021
	12.SIAM International Conference on Data Mining (SDM)	2021
	13.The ACM Web Conference (TheWebConf)	2020
	14. The 23rd International Conference on Artificial Intelligence and Statistics (AISTATS)	2020
	15. The 43th ACM Conference on Research and Development in Information Retrieval (SIGIR)	2020
	16.The Thirty-seventh International Conference on Machine Learning (ICML)	2020
	17. The 26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)	2020
	18.2020 International Conference on Data Mining (ICDM)	2020
	19.The 13th ACM International Conference on Web Search and Data Mining (WSDM)	2020
	20.The ACM Web Conference (TheWebConf)	2019
	21.2019 International Conference on Data Mining (ICDM)	2019
	22.The 28th International Joint Conference on Artificial Intelligence (IJCAI)	2019
	23. The 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)	2019
•	JOURNAL REVIEWER	
	1. The ACM Transactions on Knowledge Discovery from Data	
	2.IEEE Transactions on Knowledge and Data Engineering	
	3.Data Mining and Knowledge Discovery	
	4.The Frontier	
	5.Engineering Applications of Artificial Intelligence	
	6.IEEE Transactions on Circuits and Systems for Video Technology	
•	STUDENT VOLUNTEER	
	1.KDD-UC Mentor for ACM Mentorship Program, 2023	
	2.CS Grad Ambassadors for Fall'22 grad recruiting at UIUC, 2022	
	3.CS Grad Ambassadors for Fall'20 grad recruiting at UIUC, 2020	
	4.KDD student volunteer, 2022	
	5.KDD student volunteer, 2021	