Yue Zhao

| Contact | ☑ yzhao010@usc.edu | 213-821-2369 | |
|---|--|--|--|
| NFORMATION | github.com/yzhao062 | CS Department, SAL 104 | |
| | in linkedin.com/in/yzhao062 | Los Angeles, CA | |
| | witerbi-web.usc.edu/~yzhao010/ | United States, 90089 | |
| | I USC Faculty Directory | Department of Computer Science | |
| | G Google Scholar | University of Southern California | |
| Research Summary | I focus on building <i>robust</i> , <i>trustworthy</i> , and <i>scalable</i> AI systems by addressing challenges at three distinct but connected levels: from ensuring robustness and trustworthiness in AI (Principle Level), leveraging structured and generative AI methods for scientific and societal applications (Knowledge Level), to developing scalable and open-source AI systems (System Level). These efforts advance AI4Science, healthcare, finance, and political science. | | |
| | 1. Robust and Trustworthy AI (Principle): Ensuring AI systems can detect outliers, anomalies, and out-of-distribution (OOD) data to provide trust, fairness, and transparency. This principle-focused work underpins all other levels of AI research and applications. | | |
| | □ OOD Detection□ Outlier Detection | □ Anomaly Detection□ Trustworthiness | |
| | 2. Structured and Generative AI for Science and Applications (Knowledge): Leveraging graph-based learning to understand interconnected data, and applying generative AI methods, large language models (LLMs), and foundation models to address challenges in drug discovery, synthetic clinical trials, and political forecasting. | | |
| | □ Graph Learning □ Graph OOD Detection □ Graph Anomaly Detection □ LLMs | □ Foundation Models □ AI4Science □ Drug Discovery □ Political Forecasting | |
| | 3. Scalable and Open-Source AI (System): Developing efficient tools and frameworks for automated model selection, hyperparameter optimization, and large-scale anomaly detection. As the creator of PyOD (25M+ downloads, used by NASA, Tesla, etc.), I lead over 10 open-source projects, including PyGOD, TDC, and ADBench, collectively accumulating 20,000+ GitHub stars. | | |
| | □ Automated ML□ Distributed Systems | □ ML Systems (MLSys)□ Scalability | |
| FULL-TIME Professional Experience | University of Southern California Thomas Lord Department of Computer Science Assistant Professor (Tenure-Track) • Foundations Of Robust Trustworthy Intelligent System • USC Machine Learning Center (MaSCle): Link | Aug. 2023 - Present ems (FORTIS) Lab: Link | |
| | PwC Canada Consulting & Deals | | |
| | Senior Consultant (Data Scientist) Consultant (Data Scientist) | Aug. 2017 - Jun. 2019 Feb. 2017 - Jul. 2017 | |
| EDUCATION | Carnegie Mellon University | Pittsburgh, PA | |
| | Ph.D. in Information Systems and Management | Sep. 2019 - May. 2023 | |
| | • Affiliation: CMU automated learning systems group (C | atalyst) and Data Analytics Techniques | |

Algorithms (DATA) Lab

• Advisors and Mentors: CMU: Prof. Leman Akoglu, Prof. Zhihao Jia, and Prof. George Chen. I collaborate with Prof. Jure Leskovec at Stanford, and Prof. Philip S. Yu at UIC.

University of Toronto

Toronto, ON

Master of Science in Computer Science

Sep. 2015 - Dec. 2016

University of Cincinnati

Cincinnati, OH

Bachelor of Science in Computer Engineering

Sep. 2010 - May. 2015

Minor: Computer Science and Mathematics

Awards, Grants, and Funding

As Principal Investigator (August 2023 onwards)

| Capital One Research Awards | \$50,000 | Oct. 2024 |
|---|-------------|-----------|
| Best Paper Award @ KDD Resource-Efficient Learning Workshop | Recognition | Aug. 2024 |
| NSF ATD | \$110,000 | Aug. 2024 |
| NSF POSE | \$395,000 | Jun. 2024 |
| Google Cloud Research Innovators | Recognition | Mar. 2024 |
| AAAI New Faculty Highlights | Recognition | Feb. 2024 |

Note: Monetary values represent my portion of the funding. Total project budgets may be larger.

Prior to Principal Investigator Role (Before August 2023)

| Meta 2022 AI4AI Research Award (student co-PI) | Recognition | Oct. 2022 |
|--|-------------|-------------|
| The Norton Labs Graduate Fellowship | Fellowship | Mar. 2022 |
| CMU Presidential Fellowship | Fellowship | 2019 |
| Mitacs-Accelerate Research and Development Funding | Funding | 2016 - 2017 |
| University Global Award and Scholarship | Scholarship | 2010 - 2015 |
| Mantei/Mae Award & Scholar | Award | 2012-2015 |
| Engineer of the Month | Recognition | Jun. 2014 |

Note: Monetary values are omitted for awards and recognitions received prior to PI role.

Publications ~

Preprints & Under Submission

G SCHOLAR
R RESEARCHG

57. Tiankai Yang, Yi Nian, Shawn Li, Ruiyao Xu, Yuangang Li, Jiaqi Li, Xiyang Hu, Ryan Rossi, Kaize Ding, Xia Hu, Yue Zhao

AD-LLM: Benchmarking Large Language Models for Anomaly Detection

Under submission

arXiv preprint arXiv:2412.11142

56. Sihan Chen, Zhuangzhuang Qian, Wingchun Siu, Xingcan Hu, Jiaqi Li, Shawn Li, Yuehan Qin, Tiankai Yang, Zhuo Xiao, Wanghao Ye, Yichi Zhang, Yushun Dong, Yue Zhao

PyOD 2: A Python Library for Outlier Detection with LLM-powered Model Selection

Under submission

 ${\bf arXiv~preprint~arXiv:} {\bf 2412.12154}$

55. Lincan Li, Jiaqi Li, Catherine Chen[†], Fred Gui[†], other collaborators, <u>Yue Zhao</u>[†], Yushun Dong[†] Political-LLM: Large Language Models in Political Science

Under submission

arXiv preprint arXiv:2412.06864

(†corresponding authors)

54. Yuangang Li, Jiaqi Li, Zhuo Xiao, Tiankai Yang, Yi Nian, Xiyang Hu, Yue Zhao

NLP-ADBench: NLP Anomaly Detection Benchmark

Under submission

arXiv preprint arXiv:2412.04784

53. Jiechao Gao, Yuangang Li, Yue Zhao, Brad Campbell

H-FedSN: Personalized Sparse Networks for Efficient and Accurate Hierarchical Federated Learning for IoT Applications

Under submission

arXiv preprint arXiv:2412.06210

52. Zhendong Liu, Yi Nian, Henry Peng Zou, Li Li, Xiyang Hu, Yue Zhao

COOD: Concept-based Zero-shot OOD Detection

Under submission

arXiv preprint arXiv:2411.13578

51. Hanhui Wang, Yihua Zhang, Ruizheng Bai, Yue Zhao, Sijia Liu, Zhengzhong Tu

Edit, Away, and My Face Will Not Stay: Personal Biometric Defense against Malicious Con

Edit Away and My Face Will Not Stay: Personal Biometric Defense against Malicious Generative Editing

Under submission

arXiv preprint arXiv:2411.16832

50. Shawn Li, Huixian Gong, Hao Dong, Tiankai Yang, Zhengzhong Tu, Yue Zhao

DPU: Dynamic Prototype Updating for Multimodal Out-of-Distribution Detection

Under submission

arXiv preprint arXiv:2411.08227

49. Haoyan Xu, Kay Liu, Zhengtao Yao, Philip S. Yu, Kaize Ding, Yue Zhao

LEGO-Learn: Label-Efficient Graph Open-Set Learning

Under submission

arXiv preprint arXiv:2410.16386

48. Zerui Xu, Fang Wu, Tianfan Fu, Yue Zhao

Retrieval-Reasoning Large Language Model-based Synthetic Clinical Trial Generation

Under submission

arXiv preprint arXiv:2410.12476

47. Yuehan Qin, Yichi Zhang, Yi Nian, Xueying Ding, Yue Zhao

MetaOOD: Automatic Selection of OOD Detection Models

Under submission

arXiv preprint arXiv:2410.03074

46. Nan Hao, Yuangang Li, Kecheng Liu, Songtao Liu, Yingzhou Lu, Bohao Xu, Chenhao Li, Jintai Chen,

Ling Yue, Tianfan Fu, Xiyang Hu, Xiao Wang, <u>Yue Zhao</u>

Artificial Intelligence-Aided Digital Twin Design: A Systematic Review

Ongoing work and to be submitted

https://www.preprints.org/manuscript/202408.2063

45. Mehrdad Kiamari, Mohammad Kiamari, Bhaskar Krishnamachari, Yue Zhao

GKAN: Graph Kolmogorov-Arnold Networks

Under submission

arXiv preprint arXiv:2406.06470

44. Minqi Jiang, Chaochuan Hou, Ao Zheng, Xiyang Hu, Songqiao Han, Hailiang Huang, Xiangnan He, Philip S. Yu, Yue Zhao

Weakly Supervised Anomaly Detection: A Survey

Under submission

arXiv preprint arXiv:2302.04549

Peer-reviewed Journal Papers

43. Hao Dong, Gaetan Frusque, Yue Zhao, Eleni Chatzi, Olga Fink

NNG-Mix: Improving Semi-supervised Anomaly Detection with Pseudo-anomaly Generation *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2024 (Accepted)

42. Ling Yang*, Zhilong Zhang*, Yang Song, Shenda Hong, Runsheng Xu, <u>Yue Zhao</u>, Wentao Zhang, Bin Cui, Ming-Hsuan Yang

Diffusion Models: A Comprehensive Survey of Methods and Applications

ACM Computing Surveys (CSUR), 2023

(*equal contribution)

41. Yue Zhao*, Martin Q. Ma*, Xiaorong Zhang, Leman Akoglu

The Need for Unsupervised Outlier Model Selection: A Review and Evaluation of Internal Evaluation Strategies

ACM SIGKDD Explorations Newsletter (SIGKDD Explor.), 2023

(*equal contribution)

- 40. Kexin Huang*, Tianfan Fu*, Wenhao Gao*, <u>Yue Zhao</u>, Yusuf Roohani, Jure Leskovec, Connor W. Coley, Cao Xiao, Jimeng Sun, Marinka Zitnik
 - Artificial Intelligence Foundation for Therapeutic Science

Nature Chemical Biology (NCHEMB), 2022

(*equal contribution)

- 39. <u>Yue Zhao*</u>, Zheng Li*, Xiyang Hu, Nicola Botta, Cezar Ionescu, George H. Chen ECOD: Unsupervised Outlier Detection Using Empirical Cumulative Distribution Functions *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 2022. (*equal contribution)
- 38. <u>Yue Zhao</u>, Zain Nasrullah, Zheng Li PyOD: A Python Toolbox for Scalable Outlier Detection Journal of Machine Learning Research (JMLR), 2019.

Conference & Workshop Papers

37. Sizhe Liu, Yizhou Lu, Siyu Chen, Xiyang Hu, Tianfan Fu, <u>Yue Zhao</u>
DrugAgent: Automating AI-aided Drug Discovery Programming through LLM Multi-Agent Collaboration

AAAI Workshop on Foundation Models for Biological Discoveries (FMs4Bio), 2025.

- 36. Hao Dong, <u>Yue Zhao</u>, Eleni Chatzi, Olga Fink MultiOOD: Scaling Out-of-Distribution Detection for Multiple Modalities Advances in Neural Information Processing Systems (NeurIPS), Spotlight, 2024
- 35. Jiaqing Xie, <u>Yue Zhao</u>, Tianfan Fu.

 DeepProtein: Deep Learning Library and Benchmark for Protein Sequence Learning

 NeurIPS Workshop on AI for New Drug Modalities (AIDrugX), Spotlight, 2024.
- 34. Xueying Ding, <u>Yue Zhao</u>, Leman Akoglu
 Fast Unsupervised Deep Outlier Model Selection with Hypernetworks

 ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2024
- 33. Yuehan Qin, Yichi Zhang, <u>Yue Zhao</u>
 MetaOOD: Meta-learning for Automatic Out-of-Distribution Detection Model Selection

 ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD Workshop on Resource-Efficient Learning for Knowledge Discovery), 2024. Best Paper Award.
- 32. Lichao Sun, Yue Huang, Haoran Wang, Siyuan Wu, Qihui Zhang, Chujie Gao, Yixin Huang, Wenhan Lyu, Yixuan Zhang, Xiner Li, Zhengliang Liu, Yixin Liu, Yijue Wang, Zhikun Zhang, 50+ collaborative authors, Yue Zhao

TrustLLM: Trustworthiness in Large Language Models International Conference on Machine Learning (ICML), 2024

- Songtao Liu, Hanjun Dai, <u>Yue Zhao</u>, Peng Liu
 Preference Optimization for Molecule Synthesis with Conditional Residual Energy-based Models *International Conference on Machine Learning (ICML)*, Oral, 2024
- Yue Zhao, Leman Akoglu
 Hyperparameter Optimization for Unsupervised Outlier Detection
 International Conference on Automated Machine Learning (AutoML), 2024
- 29. Yue Zhao Towards Reproducible, Automated, and Scalable Anomaly Detection AAAI Conference on Artificial Intelligence (AAAI), New Faculty Highlights, 2024
- 28. Minqi Jiang*, Chaochuan Hou*, Ao Zheng*, Songqiao Han, Hailiang Huang † , Qingsong Wen, Xiyang Hu † , Yue Zhao †

ADGym: Design Choices for Deep Anomaly Detection.

Advances in Neural Information Processing Systems (NeurIPS), 2023
(†Corresponding author)

27. Jaemin Yoo, <u>Yue Zhao</u>, Lingxiao Zhao, Leman Akoglu
DSV: An Alignment Validation Loss for Self-supervised Outlier Model Selection
European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in
Databases (ECML/PKDD), 2023

- 26. Peng Xu, Lin Zhang, Xuanzhou Liu, Jiaqi Sun, <u>Yue Zhao</u>, Haiqin Yang, Bei Yu Do Not Train It: A Linear Neural Architecture Search of Graph Neural Networks *International Conference on Machine Learning (ICML)*, 2023
- Yue Zhao, Guoqing Zheng, Subhabrata Mukherjee, Robert McCann, Ahmed Awadallah ADMoE: Anomaly Detection with Mixture-of-Experts from Noisy Labels
 Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI), 2023
- 24. Yue Zhao, George H. Chen, Zhihao Jia TOD: GPU-accelerated Outlier Detection via Tensor Operations International Conference on Very Large Data Bases (VLDB), 2023
- 23. Songqiao Han*, Xiyang Hu*, Hailiang Huang*, Minqi Jiang*, Yue Zhao* ADBench: Anomaly Detection Benchmark Advances in Neural Information Processing Systems (NeurIPS), 2022 (*equal contribution & the corresponding author)
- Yue Zhao*, Kay Liu*, Yingtong Dou*, et al.
 Benchmarking Node Outlier Detection on Graphs
 Advances in Neural Information Processing Systems (NeurIPS), 2022
 (*equal contribution)
- Yue Zhao, Xiaorong Zhang, Leman Akoglu
 ELECT: Toward Unsupervised Outlier Model Selection
 IEEE International Conference on Data Mining (ICDM), 2022.

 Regular paper. Acceptance rate 9.77% (85/870); overall acceptance 20% (174/870).
- 20. Zhiming Xu, Xiao Huang, Yue Zhao, Yushun Dong, Jundong Li Contrastive Attributed Network Anomaly Detection with Data Augmentation Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2022 Acceptance rate 19%.
- Yue Zhao, Ryan A. Rossi, Leman Akoglu
 Automatic Unsupervised Outlier Model Selection
 Advances in Neural Information Processing Systems (NeurIPS), 2021
 Acceptance rate 26%.
- Kwei-Herng Lai, Daochen Zha, Junjie Xu, <u>Yue Zhao</u>, Guanchu Wang, Xia Hu Revisiting Time Series Outlier Detection: Definitions and Benchmarks Advances in Neural Information Processing Systems (NeurIPS), 2021
- 17. Kexin Huang*, Tianfan Fu*, Wenhao Gao*, <u>Yue Zhao</u>, Yusuf Roohani, Jure Leskovec, Connor W. Coley, Cao Xiao, Jimeng Sun, Marinka Zitnik

 Therapeutics Data Commons: Machine Learning Datasets and Tasks for Drug Discovery and Development
 - Advances in Neural Information Processing Systems (NeurIPS), 2021 (*equal contribution)
- 16. Yue Zhao*, Xiyang Hu*, Cheng Cheng, Cong Wang, Changlin Wan, Wen Wang, Jianing Yang, Haoping Bai, Zheng Li, Cao Xiao, Yunlong Wang, Zhi Qiao, Jimeng Sun, Leman Akoglu SUOD: Accelerating Large-scale Unsupervised Heterogeneous Outlier Detection Conference on Machine and Learning Systems (MLSys), 2021.
 Acceptance rate 23.5% (52/221). (*equal contribution)
- 15. Kwei-Herng Lai*, Daochen Zha*, Guanchu Wang, Junjie Xu, Yue Zhao, Devesh Kumar, Yile Chen, Purav Zumkhawaka, Minyang Wan, Diego Martinez and Xia Ben Hu TODS: An Automated Time Series Outlier Detection System (Demo paper) Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI), 2021. (*equal contribution)
- 14. Meng-Chieh Lee, <u>Yue Zhao</u>, Aluna Wang, Pierre Jinghong Liang, Leman Akoglu, Vincent S. Tseng, Christos Faloutsos
 - AutoAudit: Mining Accounting and Time-Evolving Graphs IEEE International Conference on Big Data (Big Data), 2020
- 13. Changlin Wan, Dongya Jia, <u>Yue Zhao</u>, Wennan Chang, Sha Cao, Xiao Wang, and Chi Zhang A Data Denoising Approach to Optimize Functional Clustering of Single Cell RNA-sequencing Data *IEEE International Conference on Bioinformatics and Biomedicine* (*BIBM*), 2020

- Yue Zhao, Xueying Ding, Jianing Yang, Haoping Bai.
 SUOD: Toward Scalable Unsupervised Outlier Detection
 Workshops at the Thirty-Fourth AAAI Conference on Artificial Intelligence, 2020.
 Extended version published in MLSys 2021.
- Zheng Li, <u>Yue Zhao</u>, Nicola Botta, Cezar Ionescu, Xiyang Hu COPOD: Copula-Based Outlier Detection IEEE International Conference on Data Mining (ICDM), 2020.
- Zheng Li, <u>Yue Zhao</u>, Jialin Fu SYNC: A Copula based Framework for Generating Synthetic Data from Aggregated Sources IEEE International Conference on Data Mining Workshops (ICDMW), 2020.
- 9. Yiqun Mei, <u>Yue Zhao</u>, Wei Liang DSR: An Accurate Single Image Super Resolution Approach for Various Degradations *IEEE International Conference on Multimedia and Expo (ICME*), 2020, London, UK.
- 8. <u>Yue Zhao</u>, Xuejian Wang*, Cheng Cheng*, Xueying Ding*
 Combining Machine Learning Models and Scores using combo Library (Demo paper)

 Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI), 2020.

 (*equal contribution)
- Colin Wan, Zheng Li, Alicia Guo, <u>Yue Zhao</u>
 SynC: A Unified Framework for Generating Synthetic Population with Gaussian Copula Workshops at the Thirty-Fourth AAAI Conference on Artificial Intelligence, 2020.
 Extended version published in ICDMW 2020.
- 6. Zain Nasrullah, <u>Yue Zhao</u>
 Music Artist Classification with Convolutional Recurrent Neural Networks *IEEE International Joint Conference on Neural Networks (IJCNN*), 2019, Hungary.
- Yue Zhao, Zain Nasrullah, Maciej K. Hryniewicki, Zheng Li LSCP: Locally Selective Combination in Parallel Outlier Ensembles SIAM International Conference on Data Mining (SDM), 2019, Calgary, Canada. Acceptance rate 22.7% (90/397).
- 4. <u>Yue Zhao</u>, Maciej K. Hryniewicki DCSO: Dynamic Combination of Detector Scores for Outlier Ensembles ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD Workshop on Outlier Detection De-constructed), 2018, London, UK. Extended version published in SDM 2019, renamed to LSCP.
- 3. <u>Yue Zhao</u>, Maciej K. Hryniewicki XGBOD: Improving Supervised Outlier Detection with Unsupervised Representation Learning *IEEE International Joint Conference on Neural Networks (IJCNN*), 2018, Rio, Brazil.
- Yue Zhao, Maciej K. Hryniewicki, Francesca Cheng, Boyang Fu, Xiaoyu Zhu Employee Turnover Prediction with Machine Learning: A Reliable Approach Intelligent System Conference (Intellisys), 2018, London, UK. Acceptance rate 34% (194/568).
- 1. <u>Yue Zhao</u>*, Zhongtian Qiu*, Yiqing Yang*, Weiwei Li*, Mingming Fan An Empirical Study of Touch-based Authentication Methods on Smartwatches *ACM International Symposium on Wearable Computers* (*ISWC*), 2017, Maui, USA. Acceptance rate 25.6% (23/90). (*equal contribution)

INTERNSHIP NortonLifeLock Research Group EXPERIENCE Machine Learning Research Intern

achine Learning Research Intern 2022

Microsoft Research

Machine Learning Research Intern 2022

Stanford University, Computer Science Department

Visiting Student Researcher (Prof. Jure Leskovec) 2021

IQVIA, Analytics Center of Excellence

Machine Learning Research Intern 2020

Siemens PLM Software USA

Software Engineer (Intern & Contract)

TEACHING EXPERIENCE $University\ of\ Southern\ California$

Instructor

CSCI 566 Deep Learning and Its Applications

Instructor

CSCI 566 Deep Learning and Its Applications

Carnegie Mellon University

Teaching Assistant

Managing Digital Business (Prof. David Riel)

Teaching Assistant & co-Instructor (lectures on AutoML and MLSys)

Intro to Artificial Intelligence (Prof. David Steier)

Teaching Assistant

Digital Transformation (Prof. David Riel)

Teaching Assistant (helping on course topics)

Statistics for IT Managers (Prof. Daniel Nagin)

University of Toronto

Teaching Assistant & Lab Session Instructor

Embedded Systems (Prof. Philip Anderson)

University of Cincinnati

Teaching Assistant & Lab Session Instructor

Intro to Programming (Prof. George Purdy)

Ph.D. Students

- Haoyan Xu (USC, ECE Ph.D., 2024 Spring-)
- Yuehan Qin (USC, CS Ph.D., 2024 Fall-)
- Tiankai Yang (USC, CS Ph.D., 2024 Fall-)
- Li Li (USC, CS Ph.D., 2024 Fall-)

QUALIFICATION & THESIS
COMMITTEE

- Alex Bisberg (USC, CS Ph.D.)
- Gengyu Rao (USC, CS Ph.D.)
- Mehrdad Kiamari (USC, ECE Ph.D.)
- Haonan Wang (USC, ECE Ph.D.)
- Yuan Meng (USC, ECE Ph.D.)
- Hassan Hamad (USC, ECE Ph.D.)
- Yizhou Zhang (USC, CS Ph.D.)
- Haoming Li (USC, CS Ph.D.)
- Arash Hajisafi (USC, CS Ph.D.)
- Yi Chien Lin (USC, ECE Ph.D.)
- Yuke Zhang (USC, ECE Ph.D.)

Services

Conference Organizing Committee

• Workflow Co-Chair for KDD 2023

External Reviewer for Funding Proposals

• Dutch Research Council (NWO)

Yue Zhao - CV

Last updated: December 19, 2024. Page 7 of 9

Mar. 2012 - Dec. 2014

Los Angeles, CA

Spring 2025

Spring 2024

Fall 2022

Spring 2022

Fall 2021

Fall 2015

Fall 2014

Toronto, ON

Cincinnati, OH

Pittsburgh, PA

Spring 2022 - Fall 2020

Journal Editor

- Associate Editor, IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- Action Editor, Journal of Data-centric Machine Learning Research (DMLR)

Program Committee (PC) or Area Chair (AC) for Conferences and Workshops

- ICLR 2025 (AC)
- AAAI 2025 (Senior PC)
- ICML 2024, 2025 (AC)
- AISTATS 2024, 2025 (AC)
- MLSys 2024
- KDD 2020, 2021, 2022, 2023
- IJCAI 2022, 2023
- NeurIPS 2021, 2022, 2023
- AAAI 2021, 2022, 2023
- AAAI Demonstrations 2021, 2022
- MICCAI 2020, 2021, 2022
- ICDM 2020
- KDD Workshop on Outlier Detection and Description (ODD), 2021
- KDD Workshop on Anomaly and Novelty Detection (ANDEA), 2021, 2022
- IJCAI Workshop on Artificial Intelligence for Anomalies and Novelties (AI4AN), 2020, 2021
- INFORMS Workshop on Data Science 2021

Journal Reviewer

- Journal of Machine Learning Research (JMLR)
- PNAS Nexus
- Machine Learning
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- IEEE Transactions on Knowledge and Data Engineering (TKDE)
- IEEE Internet of Things Journal (IoT-J)
- IEEE Intelligent Systems
- IEEE Journal on Selected Areas in Communications (J-SAC)
- Data Mining and Knowledge Discovery (DMAI)
- ACM Transactions on Management Information Systems (TMIS)
- Knowledge and Information Systems (KAIS)
- INFORMS Journal on Computing (IJOC)
- Big Data
- Artificial Intelligence Review (AIRE)
- Neurocomputing
- IEEE Transactions on Systems, Man, and Cybernetics: Systems
- IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB)
- IEEE Network Magazine
- IEEE Computational Intelligence Magazine (CIM)
- BioData Mining
- European Journal of Management and Business Economics (EJMBE)
- The Journal of Open Source Software (JOSS)

| SFU@NeurIPS'24 KAIST | Towards Robust Al: Advances in Outlier and OOD Detection Unsupervised Model Selection: Automation with Meta-learning | Dec. 2024 Nov. 2024 |
|---------------------------------------|---|------------------------|
| Kennesaw State University | and LLMs Unsupervised Model Selection: Automation with Meta-learning | Oct. 2024 |
| LinkedIn Anti-Abuse AI | and LLMs Outlier Detection: Automation, Systems, and GenAI | Aug. 2024 |
| Amazon Security AI | Outlier Detection: Automation, Systems, and GenAl | Aug. 2024 Aug. 2024 |
| New York University | Outlier Detection: Automation, Systems, and GenAl | Aug. 2024 Aug. 2024 |
| | | Jun. 2024 |
| University of Washington Microsoft | Outlier Detection: Automation, Systems, and GenAI | Jun. 2024 Jun. 2024 |
| USC Retreat on AI and En- | Outlier Detection: Automation, Systems, and GenAI Safety Measures for LLMs | Apr. 2024 |
| | Sajety Measures for LLMs | Apr. 2024 |
| gineering Safety Visa Research | Towards Reproducible, Automated, and Scalable AD | Apr. 2024 |
| USC Symposium on Fron- | Generative AI for Anomaly Detection | Mar. 2024 |
| tiers of Generative AI | Generative AI for Anomaly Detection | Mai. 2024 |
| AAAI New Faculty High- | Towards Reproducible, Automated, and Scalable AD | Feb. 2024 |
| lights (invited) | Towards Reproductive, Automatea, and Sediable AD | reb. 2024 |
| U of Nevada, Las Vegas | Automated and Scalable ML Algorithms and Systems | Oct. 2023 |
| Samsung Seminar | Automated and Scalable Anomaly Detection Systems | Aug. 2023 |
| KDD SoCal Day | Enable Applications by ML with Noisy Inputs | Aug. 2023 |
| CMU Catalyst | How (Not) to Fail Your Academic Job Search | May. 2023 |
| KAUST | Automated and Scalable ML Algorithms and Systems | Apr. 2023 |
| Emory University | Automated and Scalable ML Algorithms and Systems | Apr. 2023 |
| USC | Automated and Scalable ML Algorithms and Systems | Mar. 2023 |
| UC Davis | Automated and Scalable ML Algorithms and Systems | Mar. 2023 |
| Stony Brook University | Automated and Scalable ML Algorithms and Systems | Feb. 2023 |
| University of Chicago | Automated and Scalable ML Algorithms and Systems | Feb. 2023 |
| UC Merced | Automated and Scalable ML Algorithms and Systems | Feb. 2023 |
| CMU PDL Meeting | Automated and Scalable ML Algorithms and Systems | Jan. 2023 |
| CMU Data Science Seminar | Guest Lecture Automated Anomaly Detection | Nov. 2022 |
| LoG Seminar | Large-scale Graph Anomaly Detection | Oct. 2022 |
| Intuit | Anomaly Detection for Financial Risk Modeling | Aug. 2022 |
| Rice University | Large-scale Anomaly Detection with Automation | Sep. 2022 |
| Microsoft Research | Weakly-supervised Anomaly Detection | Sep. 2022 |
| Wells Fargo | Anomaly Detection for Financial Risk Modeling | Aug. 2022 |
| Columbia University | Guest Lecture Anomaly Detection | Jul. 2022 |
| Morgan Stanley | Automated Outlier Detection | Jun. 2022 |
| Microsoft Research | Automated Outlier Detection | Jun. 2022 |
| Morgan Stanley | Large-scale Anomaly Detection Systems | Mar. 2022 |
| Rutgers Business School | Outlier Model Selection | Mar. 2022 |
| Tesla | Large-scale Anomaly Detection Systems | Feb. 2022 |
| Catalyst, CMU | Systems for Data Mining Algorithms | Dec. 2021 |
| E&Y Canada | ML applications in Data Analytics | Oct. 2021 |
| University of Nottingham | General Machine Learning Applications | Jan. 2021 |

Talks and Lectures