Tejas Gokhale

Assistant Professor, Computer Science and Electrical Engineering
Director, Cognitive Vision Group
University of Maryland, Baltimore County
Website: https://www.tejasgokhale.com Email: gokhale@umbc.edu

(Last Updated: 2025/10/30)

Education

Arizona State University 2018–2023
Doctor of Philosophy (Ph.D.), Computer Engineering
Advisors: Yezhou Yang, Chitta Baral
Thesis: Towards Reliable Semantic Vision

Carnegie Mellon University 2016–2017
Master of Science, Electrical and Computer Engineering
Advisor: Aswin Sankaranarayanan

Birla Institute of Technology and Science, Pilani 2011–2015
Bachelor of Engineering (Honours), Electronics and Instrumentation Engineering

Employment

Microsoft Research Summer 2022
Research Intern, Adaptive Systems and Interaction Group
Mentors: Hamid Palangi, Besa Nushi, Vibhav Vineet, Eric Horvitz

Lawrence Livermore National Laboratory Summer 2021, 2020
Research Scholar, Machine Intelligence Group
Mentors: Rushil Anirudh, Jay Thiagarajan, Bhavya Kailkhura

Arizona State University
Graduate Research Associate, School of Computing and AI 2018–2023
Graduate Teaching Associate, School of Computing and AI 2018–2020

Snap Research Summer 2018
Research Intern, Computational Imaging Group
Mentors: Guru Krishnan, Shree Nayar

Carnegie Mellon University 2017–2018
Graduate Student Researcher, Dept. of Electrical and Computer Engineering

ST Microelectronics Fall 2014
Intern, High Speed Links Group

Steel Authority of India Limited Summer 2013
Summer Intern, Bhilai Steel Plant

Publications

See my Google Scholar page for recent updates and citation information. Citations: 1027, h-index: 19, i10-index: 20
Legend: My graduate advisees are underlined.

Peer-Reviewed Conference Proceedings

[C25] Shaswati Saha, Sourajit Saha, Manas Gaur, Tejas Gokhale. Side Effects of Erasing Concepts from Diffusion Models. In Findings of the Association for Computational Linguistics: EMNLP 2025
https://arxiv.org/abs/2508.15124 EMNLP Findings 2025

[C24] Naresh Kumar Devulapally, Shruti Agarwal, Tejas Gokhale, Vishnu Suresh Lokhande. Latent Diffusion Unlearning: Protecting against Unauthorized Personalization through Trajectory Shifted Perturbations. In Proceedings of the 33rd ACM International Conference on Multimedia, MM 2025
to-appear ACM Multimedia 2025

[C23] Nilay Yilmaz, Maitreya Patel, Yiran Lawrence Luo, Tejas Gokhale, Chitta Baral, Suren Jayasuriya, and Yezhou Yang. VOILA: Evaluation of MLLMs for perceptual understanding and analogical reasoning. In *The Thirteenth International Conference on Learning Representations*, 2025
https://arxiv.org/abs/2503.00043 ICLR 2025

[C22] Sourajit Saha and Tejas Gokhale. Improving shift invariance in convolutional neural networks with translation invariant polyphase sampling. In *2025 IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, pages 620–629. IEEE, 2025
https://arxiv.org/abs/2404.07410 WACV 2025

[C21] Maitreya Patel, Naga Sai Abhiram Kusumba, Sheng Cheng, Changhoon Kim, Tejas Gokhale, Chitta Baral, et al. Tripletclip: Improving compositional reasoning of clip via synthetic vision-language negatives. *Advances in neural information processing systems*, 37:32731–32760, 2024
https://arxiv.org/abs/2411.02545 NeurIPS 2024

[C20] Agneet Chatterjee, Gabriela Ben Melech Stan, Estelle Aflalo, Sayak Paul, Dhruba Ghosh, Tejas Gokhale, Ludwig Schmidt, Hannaneh Hajishirzi, Vasudev Lal, Chitta Baral, et al. Getting it right: Improving spatial consistency in text-to-image models. In *European Conference on Computer Vision*, pages 204–222. Springer Nature Switzerland Cham, 2024
https://arxiv.org/abs/2404.01197 ECCV 2024

[C19] Agneet Chatterjee, Yiran Luo, Tejas Gokhale, Yezhou Yang, and Chitta Baral. Revision: Rendering tools enable spatial fidelity in vision-language models. In *European Conference on Computer Vision*, pages 339–357. Springer Nature Switzerland Cham, 2024
https://arxiv.org/abs/2408.02231 ECCV 2024

[C18] Agneet Chatterjee, Tejas Gokhale, Chitta Baral, and Yezhou Yang. On the robustness of language guidance for low-level vision tasks: Findings from depth estimation. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*, pages 2794–2803, 2024
https://arxiv.org/abs/2404.08540 CVPR 2024

[C17] Maitreya Patel, Tejas Gokhale, Chitta Baral, and Yezhou Yang. Conceptbed: Evaluating concept learning abilities of text-to-image diffusion models. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 38, pages 14554–14562, 2024
https://arxiv.org/abs/2306.04695 AAAI 2024

[C16] Sheng Cheng, Tejas Gokhale, and Yezhou Yang. Adversarial bayesian augmentation for single-source domain generalization. In *Proceedings of the IEEE/CVF International Conference on Computer Vision*, pages 11400–11410, 2023
https://arxiv.org/abs/2307.09520 ICCV 2023

[C15] Man Luo, Zhiyuan Fang, Tejas Gokhale, Yezhou Yang, and Chitta Baral. End-to-end knowledge retrieval with multi-modal queries. In *61st Annual Meeting of the Association for Computational Linguistics*, pages 8573–8589. Association for Computational Linguistics (ACL), 2023
https://arxiv.org/abs/2306.00424 ACL 2023

[C14] Tejas Gokhale, Rushil Anirudh, Jayaraman J Thiagarajan, Bhavya Kailkhura, Chitta Baral, and Yezhou Yang. Improving diversity with adversarially learned transformations for domain generalization. In *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision*, pages 434–443, 2023
https://arxiv.org/abs/2206.07736 WACV 2023

[C13] Maitreya Patel, Tejas Gokhale, Chitta Baral, and Yezhou Yang. Cripp-vqa: Counterfactual reasoning about implicit physical properties via video question answering. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing*, pages 9856–9870. Association for Computational Linguistics, 2022
https://arxiv.org/abs/2211.03779 EMNLP 2022

[C12] Tejas Gokhale, Abhishek Chaudhary, Pratyay Banerjee, Chitta Baral, and Yezhou Yang. Semantically distributed robust optimization for vision-and-language inference. *Findings of the Association for Computational Linguistics: ACL 2022*, pages 1493–1513, 2021
https://arxiv.org/abs/2110.07165 ACL Findings 2022

[C11] Tejas Gokhale, Swaroop Mishra, Man Luo, Bhavdeep Singh Sachdeva, and Chitta Baral. Generalized but not robust? comparing the effects of data modification methods on out-of-domain generalization and adversarial robustness. *Findings of the Association for Computational Linguistics: ACL 2022*, pages 2705–2718, 2022
https://arxiv.org/abs/2203.07653 ACL Findings 2022

[C10] Neeraj Varshney, Pratyay Banerjee, Tejas Gokhale, and Chitta Baral. Unsupervised natural language inference using phl triplet generation. *Findings of the Association for Computational Linguistics: ACL 2022*, pages 2003–2016, 2021
https://arxiv.org/abs/2110.08438 ACL Findings 2022

[C9] Yiran Luo, Pratyay Banerjee, Tejas Gokhale, Yezhou Yang, and Chitta Baral. To find waldo you need contextual cues: Debiasing who's waldo. In *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers)*, pages 355–361. Association for Computational Linguistics, 2022
https://arxiv.org/abs/2203.16682 ACL 2022

[C8] Man Luo, Arindam Mitra, Tejas Gokhale, and Chitta Baral. Improving biomedical information retrieval with neural retrievers. In *Proceedings of the AAAI Conference on Artificial Intelligence*, pages 11038–11046, 2022
https://arxiv.org/abs/2201.07745 AAAI 2022

[C7] Pratyay Banerjee, Tejas Gokhale, Yezhou Yang, and Chitta Baral. Weakly supervised relative spatial reasoning for visual question answering. In *Proceedings of the IEEE/CVF International Conference on Computer Vision*, pages 1908–1918, 2021
https://arxiv.org/abs/2109.01934 ICCV 2021

[C6] Pratyay Banerjee, Tejas Gokhale, Yezhou Yang, and Chitta Baral. Weaqa: Weak supervision via captions for visual question answering. *Findings of the Association for Computational Linguistics: ACL-IJCNLP 2021*, pages 3420–3435, 2021
https://arxiv.org/abs/2012.02356 ACL Findings 2021

[C5] Pratyay Banerjee, Tejas Gokhale, and Chitta Baral. Self-supervised test-time learning for reading

comprehension. In *Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies*, pages 1200–1211. Association for Computational Linguistics, 2021
https://arxiv.org/abs/2103.11263 NAACL 2021

[C4] Tejas Gokhale, Rushil Anirudh, Bhavya Kailkhura, Jayaraman J Thiagarajan, Chitta Baral, and Yezhou Yang. Attribute-guided adversarial training for robustness to natural perturbations. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 35, pages 7574–7582, 2021
https://arxiv.org/abs/2012.01806 AAAI 2021

[C3] Tejas Gokhale, Pratyay Banerjee, Chitta Baral, and Yezhou Yang. Mutant: A training paradigm for out-of-distribution generalization in visual question answering. In *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, pages 878–892. Association for Computational Linguistics, 2020
https://arxiv.org/abs/2009.08566 EMNLP 2020

[C2] Zhiyuan Fang, Tejas Gokhale, Pratyay Banerjee, Chitta Baral, and Yezhou Yang. Video2commonsense: Generating commonsense descriptions to enrich video captioning. In *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, pages 840–860. Association for Computational Linguistics, 2020
https://arxiv.org/abs/2003.05162 EMNLP 2020

[C1] Tejas Gokhale, Pratyay Banerjee, Chitta Baral, and Yezhou Yang. Vqa-lol: Visual question answering under the lens of logic. In *European conference on computer vision*, pages 379–396. Springer, 2020
https://arxiv.org/abs/2002.08325 ECCV 2020

Peer-Reviewed Journals and Magazines

[J1] Tejas Gokhale. Towards robust visual understanding: A paradigm shift in computer vision from recognition to reasoning. *AI Magazine*, 45(3):429–435, 2024
https://doi.org/10.1002/aaai.12194 AI Magazine

Peer-Reviewed Workshop Papers and Extended Abstracts

[W7] Shivanand Kundargi, Kowshik Thopalli, and Tejas Gokhale. Sequentially acquiring concept knowledge to guide continual learning. In *Second Workshop on Visual Concepts*
https://openreview.net/pdf?id=U4vcWks22t CVPR 2025 Workshop on Visual Concepts

[W6] Yiran Luo, Joshua Feinglass, Tejas Gokhale, Kuan-Cheng Lee, Chitta Baral, and Yezhou Yang. Grounding stylistic domain generalization with quantitative domain shift measures and synthetic scene images. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*, pages 7303–7313, 2024
https://arxiv.org/abs/2405.15961 CVPR 2024 Vision Datasets Understanding Workshop

[W5] Tejas Gokhale. Towards robust visual understanding: from recognition to reasoning. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 38, pages 22665–22665, 2024
https://ojs.aaai.org/index.php/AAAI/article/view/30281 AAAI New Faculty Highlights

[W4] Tejas Gokhale, Joshua Feinglass, and Yezhou Yang. Covariate shift detection via domain interpolation sensitivity. In *First Workshop on Interpolation Regularizers and Beyond at NeurIPS 2022*, 2022
https://openreview.net/pdf?id=YkPjTHZDdm NeurIPS 2022 Interpolation Workshop

[W3] Kuldeep Kulkarni, Tejas Gokhale, Rajhans Singh, Pavan Turaga, and Aswin Sankaranarayanan. Halluci-net: Scene completion by exploiting object co-occurrence relationships. In *CVPR Workshop on AI for Content Creation*, 2021
https://arxiv.org/abs/2004.08614 CVPR 2021 AI for Content Creation Workshop

[W2] Tejas Gokhale, Shailaja Sampat, Zhiyuan Fang, Yezhou Yang, and Chitta Baral. Cooking with blocks: A recipe for visual reasoning on image-pairs. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, pages 5–8, 2019
https://arxiv.org/abs/1905.12042 CVPR 2019 Vision Meets Cognition Workshop

[W1] Tejas Gokhale. Vision beyond pixels: Visual reasoning via blocksworld abstractions. In *Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence,*, pages 6436–6437, 2019
https://www.ijcai.org/Proceedings/2019/0907.pdf IJCAI 2019 Doctoral Consortium

Technical Reports and Preprints

[P3] Ethan Wisdom, Tejas Gokhale, Chaowei Xiao, and Yezhou Yang. Mole recruitment: Poisoning of image classifiers via selective batch sampling. *arXiv preprint arXiv:2303.17080*, 2023
https://arxiv.org/abs/2303.17080 Tech Report

[P2] Tejas Gokhale, Hamid Palangi, Besmira Nushi, Vibhav Vineet, Eric Horvitz, Ece Kamar, Chitta Baral, and Yezhou Yang. Benchmarking spatial relationships in text-to-image generation. *arXiv preprint arXiv:2212.10015*, 2022
https://arxiv.org/abs/2212.10015 Tech Report

[P1] Maitreya Patel, Neeraj Varshney, Agneet Chatterjee, Tejas Gokhale, Yezhou Yang, Chitta Baral. Reliability-Checklist: Framework for Comprehensively Evaluating the Reliability of NLP Systems.
https://github.com/Maitreyapatel/reliability-checklist Tech Report

Books and Monographs

[B1] Man Luo, Tejas Gokhale, Neeraj Varshney, Yezhou Yang, and Chitta Baral. *Advances in Multimodal Information Retrieval and Generation*. Synthesis Lectures on Computer Vision. Springer International Publishing, 2024
https://link.springer.com/book/9783031578151 ISBN: 978-3-031-57815-1

Chapters:

- Man Luo, Tejas Gokhale, Neeraj Varshney, Yezhou Yang, and Chitta Baral. *Transformer-Driven Models for Language, Vision, and Multimodality*, pages 11–34. Springer International Publishing, Cham, 2025
- Man Luo, Tejas Gokhale, Neeraj Varshney, Yezhou Yang, and Chitta Baral. *Multimodal Information Retrieval*, pages 35–91. Springer International Publishing, Cham, 2025
- Man Luo, Tejas Gokhale, Neeraj Varshney, Yezhou Yang, and Chitta Baral. *Multimodal Content Generation*, pages 93–134. Springer International Publishing, Cham, 2025
- Man Luo, Tejas Gokhale, Neeraj Varshney, Yezhou Yang, and Chitta Baral. *Retrieval Augmented Modeling*, pages 135–157. Springer International Publishing, Cham, 2025

Ph.D. Dissertation

[T1] Tejas Gokhale. 2023. Towards Reliable Semantic Vision. Order No. 30426752, Arizona State University.
https://www.proquest.com/docview/2813822780

Intellectual Property

[IP2] Hamid Palangi, Besmira Nushi, Vibhav Vineet, Eric J Horvitz, Semiha E KAMAR EDEN, and Tejas Gokhale. Automated evaluation of spatial relationships in images, June 20 2024. US Patent App. 18/198,593 [url]

[IP1] *Systems, Methods, and Apparatuses for Implementing Improved Diversity using Adversarially Learned Transformations for Domain Generalization* (US Patent App. 63/468,653)

Funding

DARPA SciFy (Scientific Feasibility) Program. ($3.8M)
"Modular Reasoning using Hybrid Inferential Formalisms" 2024-27

UMBC Center & Institute Departmentally-Engaged Research (CIDER). ($50K)
"Identification of Virga Precipitation Events" 2025-26

UMBC Cybersecurity Institute. ($45K)
Cybersecurity Graduate Fellows Program 2025

UMBC Strategic Awards for Research Transitions (START) ($25K)
"A Framework for Quantifying Typicality of AI-Generated Images" 2024-25

Maryland Procurement Office (via Johns Hopkins University) (∼$30K)
"Modular Natural Language Understanding" (PI: Frank Ferraro) 2024

UMBC Summer Research Faculty Fellowship (SURFF) ($8K)
"Improving the Continual Learning Ability of Visual Recognition Systems via Targeted Unlearning" 2024

Microsoft Research Accelerate Foundation Models Academic Research ($20K)
Cloud Computing and OpenAI Credits 2024

Google Cloud (∼$2.5K)
Education Credits 2023-24

Teaching

Instructor, UMBC

CMSC 472/672 Computer Vision [website]	Fall 2025
CMSC 475/675 Neural Networks [website]	Spring 2025
CMSC 491/691 Robust Machine Learning [website]	Fall 2024
CMSC 491/691 Computer Vision [website]	Spring 2024, Fall 2023
CMSC 898 Pre-Doctoral Candidacy Research	Spring 2025, Fall 2024, Spring 2024
CMSC 799 Master's Thesis Research	Spring 2025, Fall 2024
CMSC 699 Independent Study	Spring 2025, Fall 2024, Spring 2024, Fall 2023
CMSC 499 Independent Study	Spring 2025

Graduate Teaching Associate, Arizona State University

CSE310: Data Structures & Algorithms	Spring 2020
CSE408: Multimedia Information Systems	Spring 2019
CSE110: Introduction to Programming,	Fall 2018

Guest Lecturer, Arizona State University

CSE598, Perception in Robotics	Spring 2022

CSE408, Multimedia Information Systems — Spring 2019

Student Instructor, BITS Pilani Goa Campus

CTE: Advanced Image Processing — Spring 2015

Students

PhD

- Sourajit Saha (M.S. UMBC) — Ph.D. CS [current], UMBC
  - WACV 2025 Broadening Participation Scholarship
  - GSA Professional Development Grant, 2025
  - Lambda Research Grant Program 2025
- Ziwei Zhang (M.S. USTC, China) — Ph.D. CS [current], UMBC
  - CSEE Summer Research Fellowship, 2025
- Shivanand Kundargi (B.S. KLE, India) — Ph.D. CS [current], UMBC
  - UMBC Cyber Graduate Fellow 2025
  - LLNL DSI Graduate Student Intern 2025
  - CSEE Summer Research Fellowship, 2025 (declined)
- Naren Sivakumar (M.S. UMBC) — Ph.D. CS [current], UMBC
  - CSEE Summer Research Fellowship, 2025
- Jordan Turley (M.S. Harvard) — Ph.D. CS [current], UMBC
- Dylan Lang (M.S. ASU) — Ph.D. CS [current], UMBC

PhD (as Committee Member)

- Agneet Chatterjee (advisor: Yezhou Yang and Chitta Baral) — Ph.D. CS [current], ASU
- Maitreya Patel (advisor: Yezhou Yang and Chitta Baral) — Ph.D. CS [current], ASU
- Mark Jarzynski (advisor: Marc Olano) — Ph.D. CS [current], UMBC
- Yiran Luo (advisor: Chitta Baral and Yezhou Yang) — Ph.D. CS [current], ASU
- Sheng Cheng (advisor: Yezhou Yang) — Ph.D. CS 2025, ASU [dissertation]

MS Thesis (as Committee Member)

- Naomi Angela Tack (advisor: Don Engel) — M.S. CS 2024, UMBC

Other MS/PhD

- Independent Study: Neel Patel — Spring 2025, Fall 2024
- Independent Study: Shaswati Saha — Ph.D. CS [current], UMBC
- Independent Study: Varun Magotra — Spring 2024

Undergraduate

- Independent Study: Nicholas Harrell — Spring 2025
- Independent Study: Alexander Shaner — Spring 2025

– Visitors: Tetevi Wilson, Dhanush Bharadwaj 2024-2025

– Visitors: Joey Mule, Luke Parrish 2023-2024

– UMBC CWIT Scholar: Chloe Wood 2024-25

– UMBC CWIT Scholar: Danielle Burton 2023-24

Teaching Assistants

– Yu Liu, CMSC 472/672 Computer Vision Fall 2025

– Ziwei Zhang, CMSC 475/675 Neural Networks Spring 2025

– Sourajit Saha, CMSC 491/691 Computer Vision Spring 2024

– Aidin Shiri, CMSC 491/691 Computer Vision Fall 2023

Ph.D. Mentees (at ASU)

– Maitreya Patel Ph.D. CS [current], ASU

– Agneet Chatterjee Ph.D. CS [current], ASU

– Nilay Yilmaz Ph.D. CS [current], ASU

MS (Thesis) Mentees (at ASU)

– Maitreya Patel M.S. CS 2022, ASU [thesis]

– Abhishek Chaudhary M.S. CS 2021, ASU [thesis]

Undergraduate Mentees (at ASU)

– ASU FURI Program: Mertay Dayanc B.S CS, 2020

– CS Capstone: Paul Butler, Jace Lord, Aashwin Ranjan, Sagarika Pannase, William Tith 2019-20

Academic Service

National Science Foundation

– Reviewer, GRFP 2025
– Panel, IIS/III 2025

Tutorial Chair, International Conference on Computer Vision (ICCV) 2025

Area Chair / Action Editor

– International Conference on Computer Vision (ICCV) 2025
– Advances in Neural Information Processing Systems (NeurIPS) 2024-25
– NeurIPS Position Papers Track 2025
– Winter Applications of Computer Vision (WACV) 2025-2026
– Association for Computational Linguistics (ACL) 2024
– North American Chapter of the ACL (NAACL) 2024
– Empirical Methods in Natural Language Processing (EMNLP) 2024

Session Chair

– Winter Applications of Computer Vision (WACV) 2025

Reviewer / Program Committee:

- Conference on Computer Vision and Pattern Recognition (CVPR) 2023-25
- International Conference on Computer Vision (ICCV) 2023
- European Conference on Computer Vision (ECCV) 2022-24
- Winter Conference on Applications of Computer Vision (WACV) 2021–24
- International Conference on Machine Learning (ICML) 2023–25
- Advances in Neural Information Processing Systems (NeurIPS) 2022–24
- International Conference on Learning Representations (ICLR) 2022–25
- AAAI Conference on Artificial Intelligence (AAAI) 2021–24
- AAAI Senior Member Presentation Track 2026
- Conference on Language Models (COLM) 2024
- Association for Computational Linguistics (ACL) 2021–24
- Empirical Methods in Natural Language Processing (EMNLP) 2021–23
- North American Chapter of the ACL (NAACL) 2021–23
- International Conference on Robotics and Automation (ICRA) 2019–2023
- International Conference on Intelligent Robots and Systems (IROS) 2022
- IEEE Robotics and Automation Letter (RA-L) 2020-24
- IEEE Transactions of Pattern Analysis and Machine Intelligence (T-PAMI) 2024-25
- ACM Multimedia 2025
- ACM Transactions of Computing for Healthcare 2024
- ACM Computing Surveys 2024
- Springer Machine Vision and Applications (MVAP) 2020
- Springer Book Proposals Reviewer 2024
- Mentor, AAAI Undergraduate Student Consortium 2024
- Award Committee, Best Student Abstract, AAAI 2024

Leadership:

- Organizer, Tutorial on Responsibly Building Generative Models [Website] ECCV'24
- Team Lead, Summer Camp for Applied Language Exploration (SCALE) 2024, JHU Human Language Technology Center of Excellence [Website] Summer 2024
- Organizer, Tutorial on Reliability of Generative Models in Vision [Website] WACV'24
- Organizer, Workshop on Open-Domain Reasoning under Multi-Modal Settings (ODRUM), [Website] [YouTube] CVPR'23
- Organizer, Workshop on Open-Domain Retrieval under Multi-Modal Settings (ODRUM), [Website] [YouTube] CVPR'22
- Organizer, Tutorial on Semantic Data Engineering under Multimodal Settings (SERUM) [Website] WACV'23
- Organizer, 2021 Frontiers of V&L Seminar Series, [Website], [YouTube] ASU

Misc:

- Lead Vocalist, CVPR House Band 2024, 2025
- Volunteer, 2019 Southwest Robotics Symposium, Tempe AZ SWRS 2019
- Volunteer, International Conference on Machine Learning 2020

University Service

University Service (at UMBC):

- UMBC HPCF Governance, Subcommittee for CHIP-GPU 2025-present
- Course Development, CMSC 475/675: Neural Networks [Website]
- Course Development, CMSC 491/691: Robust Machine Learning [Website]

- Course Development, CMSC 472/672: Computer Vision [Website]
- Regular Graduate Course Proposal, CMSC 672: Computer Vision Approved
- Regular Undergraduate Course Proposal, CMSC 472: Computer Vision Approved
- PPR Seminar: Advances in Perception, Prediction, and Reasoning [Website]
- CSEE Computer Science Undergraduate Committee 2025–present
- CSEE Computer Science Graduate Admissions Committee 2023–25
- CSEE Publicity Committee 2023–25
- Faculty Mentor, Center for Women in Technology 2023–present
- CSEE Computer Science Undergraduate Student Advisor 2023–present
- Faculty Learning Community, UMBC Faculty Development Center 2025–26
- Faculty Learning Community, UMBC Faculty Development Center 2024–25
- Faculty Mentor, UMBC IEEE + Tau Beta Pi Open Lab Fall 2024
- Faculty Volunteer, COEIT Ph.D. Open House 2025, 2024
- CSEE Lightning Talks and Open House Fall 2025, Fall 2024, Fall 2023
- Reviewer, CSEE Research Day Spring 2024
- Reviewer, UMBC ORCA Internal Grants 2025
- Reviewer, COEIT Student Summer Projects Summer 2025
- Reviewer, COEIT Cybersecurity Research and Education Proposals Fall 2024
- Interviewer, CSEE Faculty Candidates 2024, 2025
- Interviewer, COEIT Staff Searches 2025
- Member, Asian and Asian American Faculty Staff Council 2023–present

University Service (at ASU):

- Founder, Summer Vision Reading Group, ASU [Website]
- Course Development, CSE591: Frontier Topics in Vision & Language [YouTube] [website] Spring 2021, ASU
- Founding Advisor, ASU Machine Learning Club, ASU
- Award Reviewer, GPSA Teaching Award Reviewer ASU
- Mentor, Graduate Student Mentorship Program, ASU
- Project Mentor, CSE598 - Perception in Robotics, ASU Spring 2022
- Project Mentor, CSE576 - Natural Language Processing, ASU Fall 2018

Presentations

(Spotlight Talk) International Conference on Computer Vision, AC Workshop 10/2025
"Active Data Pursuit for Robust Vision"

(Invited Talk), UMBC COEIT Research Day 04/2025
"Cognitive Vision: Concepts, Contexts, and Semantics"

(Invited Talk), UMBC Information Systems Seminar 11/2024
"Cognitive Vision: Concepts, Contexts, and Semantics"

(Tutorial), European Conference on Computer Vision 10/2024
"Evaluation and Benchmarking for Text-to-Image Models"

(Lightning Talk), IARPA Video-LINCS Proposers Day 02/2024
"Robust Visual Understanding: Knowledge-Guided and Multimodal Reasoning"

(Tutorial), Winter Conference on Applications of Computer Vision 01/2024
"Challenges with Evaluation of Text-to-Image Models" [website]

(Invited Talk), PRG Seminar, UMIACS (University of Maryland) 11/2023
"Robust Visual Understanding in the Multimodal Era"

(Invited Talk) *"Towards Reliable Semantic Vision"* Spring 2023

- Rochester Institute of Technology (02/23)
- Binghamton University (03/23)
- University of Maryland Baltimore County (03/23)
- Indiana University (03/23)
- Case Western Reserve University (03/23)
- Colorado School of Mines (03/23)
- Temple University (04/2023)

(Tutorial), Winter Conference on Applications of Computer Vision 01/2023
"Semantic Data Engineering for Robustness Under Multimodal Settings" [website]

(Invited Talk) University of Illinois at Chicago 10/2022
"Robust Semantic Vision"

(Invited Talk) Microsoft Research 10/2022
"Benchmarking Spatial Relationships in Text-to-Image Generation"

(Doctoral Consortium) CVPR, New Orleans 06/2022
"Discovering Transformations for Generalization in Semantic Vision"

(Guest Lecture) Arizona State University CSE 598 03/2022
"Introduction to Generalization in Semantic Vision"

(Invited Talk) Arizona State University ML Club 09/2021
"Robust Visual Understanding"

(Doctoral Consortium), IJCAI, Macao 08/2019
"Vision Beyond Pixels"

(Tutorial) Telluride Neuromorphic Cognition Engineering Workshop, 07/2019
"Reasoning about Objects and Actions via Block-Play" [website]

(Invited) Birla Institute of Technology and Science (BITS Pilani) 04/2018
"Deep Learning Methods in Imaging and Computer Vision"

Awards

- CVPR 2024 VDU Workshop, Best Paper Award 2024
- Research Excellence Award, ASU GPSA 2022
- Outstanding Mentor Award, ASU GPSA 2022
- NeurIPS Top Reviewer NeurIPS 2022
- CVPR 2022 Doctoral Consortium CVPR 2022
- ICLR Best Reviewer ICLR 2022
- SCAI Doctoral Fellowship (ASU), 2022, 2021, 2020
- Engineering Graduate Fellowship, (ASU Engineering) 2023, 2020
- ASU GPSA Travel Award for WACV 2023
- Graduate College Travel Award (declined) WACV'23, CVPR'22
- Graduate College Travel Award (accepted) ICCV'21, EMNLP'20, ECCV'20
- IJCAI 2019 Doctoral Consortium IJCAI 2019
- Inducted, IEEE Eta Kappa Nu, Sigma Chapter CMU, 2017

- National Talent Scholarship, National Council of Educational Research and Training (Govt. of India) 2007–2015

Media

- UMBC team leads research into AI tools that can assess the feasibility of scientific claims
  UMBC News 04/2025
- Alum inspires next generation of computer vision researchers
  ASU Full Circle 10/2024
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