TEJAS GOKHALE

699 S Mill Ave, Tempe AZ 85281 tgokhale@asu.edu tejas-gokhale.github.io

EDUCATION

Ph.D.	Computer Engineering	Arizona State University	*2018–present*
M.S.	Electrical and Computer Engineering	Carnegie Mellon University	*2017*
B.E. (Honors)	Electronics and Instrumentation	BITS Pilani, India	*2015*

PUBLICATIONS

GOOGLE SCHOLAR

Conference Proceedings

Semantically Distributed Robust Optimization for Vision-and-Language Inference
T. Gokhale, A. Chaudhary, P. Banerjee, C. Baral, Y. Yang
https://arxiv.org/abs/2110.07165 ACL Findings 2022

Generalized but not Robust? Comparing the Effects of Data Modification Methods on Out-of-Domain Generalization and Adversarial Robustness
T. Gokhale, S. Mishra, M. Luo, B. Sachdeva, C. Baral
(to appear) ACL Findings 2022

Unsupervised Natural Language Inference Using PHL Triplet Generation
N. Varshney, P. Banerjee, **T. Gokhale**, C. Baral
https://arxiv.org/abs/2110.08438 ACL Findings 2022

Improving Biomedical Information Retrieval with Neural Retrievers
M. Luo, A. Mitra, **T. Gokhale**, C. Baral
https://arxiv.org/abs/2201.07745 AAAI 2022

Weakly Supervised Relative Spatial Reasoning for Visual Question Answering
P. Banerjee, **T. Gokhale**, Y. Yang, C. Baral
https://arxiv.org/abs/2109.01934 ICCV 2021

WeaQA: Weak Supervision via Captions for Visual Question Answering
P. Banerjee, **T. Gokhale**, Y. Yang, C. Baral
https://arxiv.org/abs/2012.02356 ACL Findings 2021

Self-Supervised Test-Time Learning for Reading Comprehension
P. Banerjee, **T. Gokhale**, C. Baral
https://arxiv.org/abs/2103.11263 NAACL 2021

Attribute-Guided Adversarial Training for Robustness to Natural Perturbations
T. Gokhale, R. Anirudh, B. Kailkhura, J. Thiagarajan, C. Baral, Y. Yang
https://arxiv.org/abs/2012.01806 AAAI 2021

Mutant: A Training Paradigm for Out-of-Distribution Generalization in Visual Question Answering
T. Gokhale, P. Banerjee, C. Baral, Y. Yang
https://arxiv.org/abs/2009.08566 EMNLP 2021

Video2commonsense: Generating commonsense descriptions to enrich video captioning
Z. Fang, **T. Gokhale**, P. Banerjee, C. Baral, Y. Yang
https://arxiv.org/abs/2003.05162 EMNLP 2021

VQA-LOL: Visual question answering under the lens of logic
T. Gokhale, P. Banerjee, C. Baral, Y. Yang
https://arxiv.org/abs/2002.08325 ECCV 2020

Workshop Papers / Pre-Prints

Halluci-Net: Scene Completion by Exploiting Object Co-occurrence Relationships
K. Kulkarni, **T. Gokhale**, R. Singh, P. Turaga, A. Sankaranarayanan
https://arxiv.org/abs/2004.08614 AI for Content Creation @ CVPR 2021

Cooking With Blocks: A Recipe for Visual Reasoning on Image-Pairs
T. Gokhale, S. Sampat, Z. Fang, Y. Yang, C. Baral
Long version: https://arxiv.org/abs/1905.12042 Vision Meets Cognition @ CVPR 2021

Proposal Writing

An Active Approach for Data Engineering to Improve Vision-Language Tasks
PI: Yezhou Yang, Co-PI: Chitta Baral *Accepted and Funded by NSF*
(Conceptualized and wrote 2 of 3 research plans)

EXPERIENCE

Lawrence Livermore National Labs, Livermore CA May 2021 - Aug 2021
Research Scholar *(Mentor: Rushil Anirudh)*

· *Keywords:* single-source domain generalization, adversarial training.

Lawrence Livermore National Labs, Livermore CA May 2020 - Aug 2020
Research Scholar *(Mentor: Rushil Anirudh)*

· *Keywords:* Robustness to Natural Perturbations, Semantic Shifts, Geometric Transformations.

Snap Inc., Seattle May 2018 - Aug 2018
Research Intern *(Mentors: Guru Krishnan & Shree Nayar)*

· *Keywords:* Audio Trigger/Keyword Spotting, small neural networks for On-Device Inference

Carnegie Mellon University Jan 2017 - May 2018
Graduate Student Researcher *(Advisor: Aswin Sankaranarayanan)*

· semantic hashing, image super-resolution, image synthesis from partial inputs.

TEACHING/MENTORING

Teaching Associate, ASU,
CSE310 (Data Struct. & Algorithms), CSE408 (Multimedia Info Systems), CSE110 (Intro to Programming)
Masters Thesis Mentor (at ASU),
Abhishek Chaudhary, AY 2020-21
Huiliang Shao, AY 2021-22
Maitreya Patel, AY 2022-2023
Capstone Mentor, mentored 5 BS students in projects on vision&language Fall 2019, Spring 2020
Project Mentor, CSE576 - Natural Language Processing, ASU Fall 2018
Project Mentor, CSE598 - Perception in Robotics, ASU Spring 2022
Instructor, CTE: Advanced Image Processing, BITS Pilani Goa Campus Spring 2015

INVITED TALKS

Mar'22, *(Guest Lecture)* "Introduction to Generalization in Semantic Vision" ASU CSE 598
Sep'21, *(Invited)* "Robust Visual Understanding", ASU ML Club
Aug'19, "Vision Beyond Pixels", IJCAI Doctoral Consortium, IJCAI 2019, Macao
Jul'19, "Reasoning about Objects and Actions via Block-Play", Telluride 2019
Apr'18, *(Invited)* "Deep Learning Methods in Imaging and Computer Vision", BITS Goa

SERVICE / LEADERSHIP

Reviewer: NeurIPS 2022, ICLR 2022, ECCV 2022, AAAI 2022, 2021; *ACL 2022, EMNLP 2021, NAACL 2021; WACV 2022; ICRA 2021, 2020, 2019; IEEE Robotics and Automation Letters, Springer MVAP
Co-Organizer, O-DRUM: Workshop on Open-Domain Retrieval under Multi-Modal Settings, Website
CVPR 2022 **Co-Organizer**, 2021 Frontiers of V&L Seminar Series, Website, ASU
Founder, Summer Vision Reading Group, Website, multi-university initiative
Volunteer, 2019 Southwest Robotics Symposium, Tempe AZ
Volunteer, International Conference on Machine Learning 2020, Virtual
Advisor, ASU Machine Learning Club, ASU
Mentor, Graduate Student Mentorship Program, ASU
Student Mentor, Peer Mentorship Program BITS Pilani

AWARDS

CIDSE Doctoral Fellowship (CIDSE, ASU), Spring 2022, Spring 2021, 2020
Engineering Graduate Fellowship, (ASU Engineering), Spring 2020
Graduate College Travel Award, (ASU), for ICCV 2021, EMNLP 2020, ECCV 2020
IJCAI Doctoral Consortium Travel Award, for IJCAI 2019
Inducted, IEEE Eta Kappa Nu, Sigma Chapter (CMU), Jan 2017
National Talent Scholarship (Govt. of India), 2007-2015

REFERENCES

Yezhou Yang	Assistant Professor,	Arizona State University	yz.yang@asu.edu
Chitta Baral	Professor,	Arizona State University	chitta@asu.edu
Rushil Anirudh	Computer Scientist,	Lawrence Livermore National Labs	anirudh1@llnl.gov