

# Yogesh KULKARNI

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 [LinkedIn](#)    [Google Scholar](#)

## RESEARCH INTERESTS

My research centers on building multimodal foundation models with reasoning capabilities that integrate vision (image/video), language, and audio through cross-modal alignment and grounding via Reinforcement Learning (for eg., DPO and GRPO).

**Key Interests:** Multimodal Large Language Models (Alignment, Reasoning), Reinforcement Learning based Post-Training, Audio - Video Understanding, Egocentric Video Understanding

## EDUCATION

May 2028 Aug 2024	Arizona State University, TEMPE, AZ, USA Ph.D. in Computer Science   Advisor : <a href="#">Dr. Pooyan Fazli</a>   GPA : 4.19/4.0
May 2024 Aug 2022	University of Southern California, LOS ANGELES, CA, USA Master of Science in Computer Science   GPA : 3.67/4.0
May 2022 Aug 2018	Pune Institute of Computer Technology, PUNE, India Bachelor of Engineering in Computer Engineering   CGPA : 9.8/10.0

## EXPERIENCE

Present Aug 2024	People and Robots Laboratory (PeRL), ARIZONA STATE UNIVERSITY, Tempe, AZ Graduate Research Assistant   Advisor : <a href="#">Dr. Pooyan Fazli</a> <ul style="list-style-type: none"><li>➤ Enhancing reasoning and alignment in video-language models through efficient, self-supervised preference optimization and reinforcement learning.</li></ul>
Aug 2023 Jun 2023	Nokia Bell Labs, NEW PROVIDENCE, NJ, USA Research Scientist Intern   Advisor : <a href="#">Dr. Thomas Woo</a> <ul style="list-style-type: none"><li>➤ Accelerating distributed training of large language models by designing efficient model and pipeline parallelism strategies for heterogeneous clusters.</li></ul>
Mar 2024 Jan 2023	USC Institute for Creative Technologies, LOS ANGELES, CA, USA Graduate Research Assistant   Advisor : <a href="#">Dr. Meida Chen</a> <ul style="list-style-type: none"><li>➤ Developed a 3D style transfer pipeline using CLIP-guided Gaussian splatting and diffusion models for large scale aerial point clouds.</li></ul>
Oct 2021 Jul 2021	RBCDSAI (IIT Madras), CHENNAI, India Research Intern   Advisor : <a href="#">Dr. Nivethitha Somu</a> <ul style="list-style-type: none"><li>➤ Proposed an end-to-end framework for high-accuracy electricity theft detection in industrial smart grids using Enhanced Dynamic Time Warping.</li></ul>
Oct 2020 Jul 2020	DRDO HQ, NEW DELHI, India Research Intern <ul style="list-style-type: none"><li>➤ Developed a novel, scalable framework for malware analysis by building a stacked ensemble classifier to detect malicious LSB steganography in images with high accuracy.</li></ul>

## PUBLICATIONS

[EMNLP' 25] Yogesh Kulkarni, Pooyan Fazli "VideoPASTA : 7K Preference Pairs That Matter for Video-LLM Alignment" *In Proceedings of 2025 Conference on Empirical Methods in Natural Language Processing* [PDF]

[COLM' 25] Yogesh Kulkarni, Pooyan Fazli "VideoSAVi : Self-Aligned Video Language Models without Human Supervision" *In Proceedings of 2nd Conference on Language Modeling* [PDF]

[arXiv' 25] Yogesh Kulkarni, Pooyan Fazli "EgoVITA : Learning to Plan and Verify for Egocentric Video Reasoning" *Arxiv Preprint 2025. Under Review.* [PDF]

[arXiv' 25] Yogesh Kulkarni, Pooyan Fazli "AVATAR : Reinforcement Learning to See, Hear, and Reason Over Video" *Arxiv Preprint 2025. Under Review.* [PDF]

[arXiv' 25] Chaoyu Li, Yogesh Kulkarni, Pooyan Fazli "ReGATE : Learning Faster and Better with Fewer Tokens in MLLMs" *Arxiv Preprint 2025. Under Review.* [PDF]

[ICDM' 21] **Yogesh Kulkarni**, S. Hussain, K. Ramamritham, N. Somu "EnsembleNTLDetect: An intelligent framework for electricity theft detection in smart grid" *In Proceedings of IEEE International Conference on Data Mining Workshops* [PDF]

[ACNS' 21] **Yogesh Kulkarni**, K. Bhambani "Kryptonite: An adversarial attack using regional focus" *In Proceedings of International Conference on Applied Cryptography and Network Security* [PDF]

[Big Data' 20] **Yogesh Kulkarni**, A. Gorkar "Intensive image malware analysis and least significant bit matching steganalysis" *In Proceedings of IEEE International Conference on Big Data* [PDF]

## TEACHING EXPERIENCE

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**Graduate Teaching Associate**, Arizona State University

- > CSE 485 : Computer Science Capstone I, Spring 2025
- > CSE 240 : Intro to Programming Languages, Fall 2024, Spring 2025
- > CSE 220 : Programming for Computer Engineering, Fall 2024

## HONORS AND AWARDS

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| > Conference Travel Grant for ICDM conference in Auckland, NZ          | Dec 2021 |
| > IIT Madras Summer Fellowship   | Sep 2021 |
| > Conference Travel Grant for IEEE Big Data Conference in Atlanta, USA | Dec 2020 |

## PROFESSIONAL SERVICE

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**Conference Reviewer**

- > CVPR 2025, 2026
- > AAAI 2026
- > ICCV 2025
- > ACL Rolling Review (ARR)