

Zihui (Sherry) Xue

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<https://zihuixue.github.io>
GITHUB | SCHOLAR

Education	The University of Texas at Austin , Austin, USA Ph.D. in Electrical and Computer Engineering GPA 4.00/4.00, Advisor: Prof. Kristen Grauman	2020 - Present
	Fudan University , Shanghai, China B.E. in Electronic and Information Science and Technology GPA: 3.66/4.00, Elite Engineering Program (top 5%)	2016 - 2020
	University of California, Santa Barbara , Santa Barbara, USA UCEAP Exchange Program GPA: 4.00/4.00, The College of Engineering Dean's Honors List	2018 - 2018
Research Interests	Computer vision and machine learning <i>Video understanding, multimodal learning, video-language models (VLMs)</i>	
Experience	Google DeepMind Student Researcher (<i>Hosts: Tengda Han, Dima Damen</i>)	London, UK May 2025 - Dec. 2025
	FAIR, Meta AI Visiting Student Researcher (<i>Host: Kristen Grauman</i>)	Austin, USA Jan. 2023 - Jan. 2025
	FAIR, Meta AI Research Intern (<i>Mentor: Lorenzo Torresani</i>)	New York, USA May 2022 - Dec. 2022
	Shanghai Qi Zhi Institute Research Assistant (<i>Mentor: Hang Zhao</i>)	Shanghai, China Aug. 2020 - Aug. 2021
Preprints	Seeing without Pixels: Perception from Camera Trajectories <i>arXiv, 2025</i> Zihui Xue , Kristen Grauman, Dima Damen, Andrew Zisserman, Tengda Han	
Publications	Seeing the Arrow of Time in Large Multimodal Models <i>NeurIPS, 2025</i> Zihui Xue , Mi Luo, Kristen Grauman	
	When Thinking Drifts: Evidential Grounding for Robust Video Reasoning <i>NeurIPS, 2025</i> Mi Luo, Zihui Xue , Alex Dimakis, Kristen Grauman	
	Vid2Coach: Transforming How-To Videos into Task Assistants <i>The ACM Symposium on User Interface Software and Technology (UIST), 2025</i> Mina Huh, Zihui Xue , Ujjaini Das, Kumar Ashutosh, Kristen Grauman, Amy Pavel	
	REG: Rectified Gradient Guidance for Conditional Diffusion Models <i>ICML, 2025</i>	

Zhengqi Gao, Kaiwen Zha, Tianyuan Zhang, **Zihui Xue**, Duane S Boning

Progress-Aware Video Frame Captioning

CVPR, 2025

Zihui Xue, Joungbin An, Xitong Yang, Kristen Grauman

Viewpoint Rosetta Stone: Unlocking Unpaired Ego-Exo Videos for View-invariant Representation Learning

CVPR, 2025 (Oral)

Mi Luo, **Zihui Xue**, Alex Dimakis, Kristen Grauman

HOI-Swap: Swapping Objects in Videos with Hand-Object Interaction Awareness

NeurIPS, 2024

Zihui Xue, Mi Luo, Changan Chen, Kristen Grauman

Put Myself in Your Shoes: Lifting the Egocentric Perspective from Exocentric Videos

ECCV, 2024

Mi Luo, **Zihui Xue**, Alex Dimakis, Kristen Grauman

Action2Sound: Ambient-Aware Generation of Action Sounds from Egocentric Videos

ECCV, 2024 (Oral)

Changan Chen*, Puyuan Peng*, Ami Baid, **Zihui Xue**, Wei-Ning Hsu, David Harwath, Kristen Grauman

Learning Object State Changes in Videos: An Open-World Perspective

CVPR, 2024

Zihui Xue, Kumar Ashutosh, Kristen Grauman

Detours for Navigating Instructional Videos

CVPR, 2024 (Highlight)

Kumar Ashutosh, **Zihui Xue**, Tushar Nagarajan, Kristen Grauman

Ego-exo4d: Understanding skilled human activity from first-and third-person perspectives

CVPR, 2024 (Oral)

Kristen Grauman, Andrew Westbury, Lorenzo Torresani, Kris Kitani, Jitendra Malik, ..., **Zihui Xue**, et al.

Learning Fine-grained View-Invariant Representations from Unpaired Ego-Exo Videos via Temporal Alignment

NeurIPS, 2023

Zihui Xue, Kristen Grauman

Egocentric Video Task Translation

CVPR, 2023 (Highlight)

Zihui Xue, Yale Song, Kristen Grauman, Lorenzo Torresani

The Modality Focusing Hypothesis: Towards Understanding Crossmodal Knowledge Distillation

ICLR, 2023 (Oral)

Zihui Xue*, Zhengqi Gao*, Sucheng Ren*, Hang Zhao

Dynamic Multimodal Fusion

CVPR MULA Workshop, 2023

Zihui Xue, Radu Marculescu

SUGAR: Efficient Subgraph-level Training via Resource-aware Graph Partitioning
IEEE Transactions on Computers, 2023

Zihui Xue, Yuedong Yang, Radu Marculescu

Anytime Depth Estimation with Limited Sensing and Computation Capabilities on Mobile Devices

CoRL, 2022

Yuedong Yang, **Zihui Xue**, Radu Marculescu

Co-advise: Cross Inductive Bias Distillation

CVPR, 2022

Sucheng Ren, Zhengqi Gao, Tianyu Hua, **Zihui Xue**, Yonglong Tian, Shengfeng He, Hang Zhao

What makes multi-modal learning better than single (provably)

NeurIPS, 2021

Yu Huang*, Chenzhuang Du*, **Zihui Xue**, Xuanyao Chen, Hang Zhao, Longbo Huang

On Feature Decorrelation in Self-Supervised learning

ICCV, 2021 (Oral)

Tianyu Hua*, Wenxiao Wang*, **Zihui Xue**, Sucheng Ren, Yue Wang, Hang Zhao

Multimodal Knowledge Expansion

ICCV, 2021

Zihui Xue, Sucheng Ren, Zhengqi Gao, Hang Zhao

Sampling graphlets of multiplex networks: a restricted random walk approach

ACM Transactions on the Web, 2021

Simiao Jiao, **Zihui Xue**, Xiaowei Chen, Yuedong Xu

Talks	Video Reasoning in Large Multimodal Models <i>Invited talk at Multimodal Algorithmic Reasoning Workshop, NeurIPS 2025</i>	Dec. 2025
	Progress-Aware Video Frame Captioning <i>Invited talk at Weekly Reading Session, Runway</i> <i>Invited talk at Visual Recognition course, UT Austin</i>	July 2025
	Swapping Objects in Videos with Hand-Object Interaction Awareness <i>Invited talk at Multimodal Weekly, TwelveLabs</i>	Feb. 2025
	Learning Fine-grained Activities from Videos <i>Invited talk at Stanford Medical AI and Computer Vision Lab</i>	July 2024
	Learning Object State Changes in Videos: An Open-World Perspective <i>Invited talk at EAISeminar, FAIR, Meta</i>	May 2024
	Egocentric Video Task Translation <i>Invited talk at Egocentric Multimodal Activity Recognition Workshop, FAIR, Meta</i>	Nov. 2022
Honors & Awards	MIT EECS Rising Star Graduate Engineering Council Travel Grant, UT Austin	2025 2024

1st Place in Talking-To-Me, Ego4D@ECCV 23 Challenge	2023
3rd Place in PNR Keyframe Localization, Ego4D@ECCV 23 Challenge	2023
Second Prize of the Scholarship for Outstanding Student, Fudan University	2020
Nation Second Prize in China Undergraduate Mathematical Contest in Modeling	2018
8/2115 (1st round) and 13/2116 (2nd round) in Alibaba Global Scheduling Algorithm	2018
Tung OOCL Scholarship (the First Prize), Fudan University	2018
Third Prize of the Scholarship for Outstanding Students, Fudan University	2017

Media Coverage	Meta AI Blog , Introducing Ego-Exo4D: A foundational dataset for research on video learning and multimodal perception	2024
	MarkTechPost , Meet Ego-Exo4D: A Foundational Dataset and Benchmark Suite to Support Research on Video Learning and Multimodal Perception	2024
	Meta AI Research , Advancing foundational research: overcoming challenges of video learning and multimodal perception	2023
	Analytics India Magazine , Top 8 papers by Meta AI	2023
	Meta AI Blog , Egocentric Video Task Translation	2023
Technical Skills	Languages & Frameworks: Python, PyTorch, LaTeX, HTML	
	Libraries & Tools: Transformers (HuggingFace), DeepSpeed, Slurm, FFmpeg, OpenCV, Git, Bash	
Professional Service	Journal Reviewer: IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Multimedia, International Journal of Computer Vision	
	Conference Reviewer: CVPR, ECCV, ICCV, ICML, NeurIPS, ICLR, CoRL	