

Curriculum Vitae - Aditya Sarkar

PhD Student · University of Maryland

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Research Interests

Video Understanding Action recognition

Multimodal learning Visual (images, videos) · Textual (natural language)

Education

University of Maryland College Park

PhD in Computer Engineering

College Park, MD, US

2024 – 2029

- **Specialization:** Multimodal Learning
- Joined UMIACS in 2024, conducting research in computer vision
- **Advisor:** Prof. Ang Li, **GPA:** 4.00/4

Indian Institute of Technology (IIT) Mandi

BTech (Honors) in Electrical Engineering (Gold Medalist)

India

2019 – 2023

- **Specialization:** Computer Networks and Protocols
- President of India Gold Medal Awardee in 2023
- **Thesis:** Analytical study of IEEE 802.11bd protocol
- **Advisor:** Sreelakshmi Manjunath, **Major GPA:** 3.98/4

Experience

Institute for Advanced Computer Studies, University of Maryland

Graduate Research Assistant

College Park, MD

Jan. '25 – Present

- **Collaborators:** David Jacobs, Shlok Mishra (Meta)

Statistical Visual Computing Lab, University of California

Student Researcher

San Diego, CA

Sept. '23 – Nov. '24

- **PI:** Nuno Vasconcelos. Published in **ICLR '26**

Machine Learning and Genomics Lab, University of California

Student Researcher

Los Angeles, CA

July '20 – May '22

- **PI:** Serghei Mangul, Eleazar Eskin. Published 3 papers in **Genome Biology** (IF 17.9), **Briefings in Bioinformatics** (IF 13.99) and **PeerJ CS** (2.5).

Honors & Awards

- **Graduate fellowship** at University of Maryland in 2024.
- **Walmart Predoc Fellowship**, Department of CSA, IISc Bangalore in 2023.
- **Graduate scholarship**, Department of CS, UCLA in 2022.
- **President of India Gold Medal**, Department of SCEE, IIT Mandi in 2023.
- **Institute Silver Medal** for best thesis, Department of SCEE, IIT Mandi in 2023.
- **National Talent Search Scholarship**, Government of India in 2017.

Technical Skills

Programming Languages Python, MATLAB, C++, HTML/CSS, Bash/Unix, Git.

Deep Learning Languages PyTorch, Tensorflow, Accelerate, Distributed Training.
English, Japanese

Academic Service

Peer reviewer ICCV '25

Teaching Assistant ENEE222, ENEE290, CMSC415

Publications & Ongoing Projects

Memory Augmented Plug-and-Play Selective Prediction	Sep '24 - Jan '25
Aditya Sarkar, Yi Li, Jiacheng Cheng, Shlok Kumar, Nuno Vasconcelos	ICLR '26
Honest: Quantifying the Impact of Temporal Dimensions on Video Complexity	Aug '25 - Oct '25
Aditya Sarkar, Y. Li, ..., A. Singh, S. Mishra, D. Jacobs, N. Vasconcelos	<i>To be submitted in ECCV '26</i>
Analyzing how Video-LLMs understand symbols in Multiple Choice Questions	Oct '25 - Present
Aditya Sarkar, S. He, Y. Li, J. Cheng, S. Mishra, D. Jacobs, A. Li, N. Vasconcelos	<i>To be submitted in ECCV '26</i>
Trinity: Image Generation From Interleaved Image-Text Prompt	Jan '26 - Present
Aditya Sarkar, X. Pan, S.N. Sai, S. Ghosh, S. Mishra, A. Singh, D. Jacobs	<i>Ongoing</i>
Video understanding with one-shot diffusion models	Feb '26 - Present
Aditya Sarkar, R. Rawal, Y. Li, ..., A. Singh, S. Mishra, D. Katabi, T. Goldstein	<i>Ongoing</i>