AVIJIT DASGUPTA

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EDUCATION

International Institute of Information Technology, Hyderabad, India   2017-2026
M.S. and Ph.D. in Computer Science and Engineering
- **Advisors:** Prof. C. V. Jawahar, Dr. Karteek Alahari
- **Funded by:** Google India Ph.D. Fellowship
- **Research area:** First-Person Vision, Assistive Technologies, Multimodal Reasoning
- **CGPA:** 8.29 / 10

West Bengal University of Technology, Kolkata, India   2009-2013
B.Tech. in Electronics and Communication Engineering
- **CGPA:** 8.37 / 10

EXPERIENCE

Research Ph.D. Intern   Jun 2025 - Nov 2025
Adobe Research   *Bangalore, India*
- Developed a framework to encode human tacit design principles into MLLMs for slide design.
- Currently under review as both a conference submission and a patent.

Visiting Researcher   Feb 2019 - May 2019
Thoth, Inria   *Grenoble, France*
- Explored reinforce learning algorithms such as A2C, PPO, TRPO for video understanding.

Research Intern   Oct 2016 - Dec 2016
CVIT, IIIT-H   *Hyderabad, India*
- Worked on deep neural network visualization.

Junior Research Fellow   July 2014 - Oct 2016
Image Processing and Compute Vision Lab, IIT KGP   *Kharagpur, India*
- Worked on various projects related to medical imaging.
- Resulted in papers at EMBC, ISBI, *etc.*

Undergraduate Research Intern   July 2012 - July 2013
Machine Intelligence Unit, ISI   *Kolkata, India*
- Worked on biologically inspired image filters.

PUBLICATIONS

1. **Avijit Dasgupta**, C. V. Jawahar, Karteek Alahari. **PuzzleMate: User-in-the-Loop Evaluations of MLLMs for Jigsaw Puzzle Assistance**, *in preparation*.

2. **Avijit Dasgupta**, Joseph K J, Sunandini Sanyal, Sambaran Bandyopadhyay, Sayan Nag, Pannaga Shivaswamy, Balaji Vasan Srinivasan, C.V. Jawahar, Karteek Alahari. **Learning to Design Stylized Slides**, *under submission*.

3. Sainithin Artham, **Avijit Dasgupta**, Shankar Gangisetty, C. V. Jawahar. **DriveSafe: A Joint Framework for Risk Prediction and Safety Suggestion in Driving Scenario**, *under submission*.

4. **Avijit Dasgupta**, Yale Song, C. V. Jawahar, Karteek Alahari. **Evaluating Egocentric Video Domain Generalization in the Era of VLMs**, *under submission*.

5. Ajoy Mondal, Saumya Mundra, **Avijit Dasgupta**, C. V. Jawahar. **UniTabBank: A Large Scale Multi-Lingual, Multi-Layout, Multi-Type, Multi-Format Dataset for Table Detection**, *WACV*, 2026.

6. **Avijit Dasgupta***, Sainithin Artham*, Shankar Gangisetty, C. V. Jawahar. **Distilling *What* and *Why*: Enhancing Driver Intention Prediction with MLLMs**, *WACV*, 2026.

7. Kristen Grauman, Andrew Westbury, Lorenzo Torresani, Kris Kitani, Jitendra Malik, ..., **Avijit Dasgupta*** ..,. **Ego-Exo4D: Understanding Skilled Human Activity from First- and Third-Person Perspectives**, *IJCV*, 2025.

8. Ritabrata Chakraborty, Rajatsubhra Chakraborty, **Avijit Dasgupta**, Sandeep Chaurasia. **Do We Need Large VLMs for Spotting Soccer Actions?**, *IJCNLP-AACL (SRW)*, 2025. (*Oral*)

9. Shayon Dasgupta, **Avijit Dasgupta**, C. V. Jawahar. **Are We There Yet? Exploring the Capabilities of MLLMs in Assistive AI Applications**, *ICVGIP*, 2025. (*Oral*)

10. **Avijit Dasgupta**, C. V. Jawahar, Karteek Alahari. **Source-free Video Domain Adaptation by Learning from Noisy Labels**, *Pattern Recognition*, 2025.

11. Kristen Grauman, Andrew Westbury, Lorenzo Torresani, Kris Kitani, Jitendra Malik, ..., **Avijit Dasgupta*** ..,. **Ego-Exo4D: Understanding Skilled Human Activity from First- and Third-Person Perspectives**, *CVPR*, 2024. (*Oral*)

12. **Avijit Dasgupta**, C. V. Jawahar, Karteek Alahari. **Overcoming Label Noise for Source-free Unsupervised Video Domain Adaptation**, *ICVGIP*, 2022. (*Best paper runner-up*)

13. **Avijit Dasgupta**, C. V. Jawahar, Karteek Alahari. **Context Aware Group Activity Recognition**, *ICPR*, 2020.

14. **Avijit Dasgupta**, Sonam Singh. **A Fully Convolutional Neural Network Based Structured Prediction Approach Towards Retinal Vessel Segmentation**, *ISBI*, 2017.

15. **Avijit Dasgupta**, Sudipta Mukhopadhyay, Shrikant A Mehre, Parthasarathi Bhattacharyya. **Morphological Geodesic Active Contour Based Automatic Aorta Segmentation in Thoracic CT Images**, *CVIP*, 2016.

16. Manashi Chakraborty, Sudipta Mukhopadhyay, **Avijit Dasgupta**, Santanu Patsa, Nishat Anjum, Jay Gopal Ray. **A new approach of oral cancer detection using bilateral texture features in digital infrared thermal images**, *EMBC*, 2016.

17. Manashi Chakraborty, Sudipta Mukhopadhyay, **Avijit Dasgupta**, Swapna Banerjee, Santanu Patsa, Jay G Ray, K Chaudhuri. **A new paradigm of oral cancer detection using digital infrared thermal imaging**, *SPIE Medical Imaging*, 2016.

18. **Avijit Dasgupta**, Ashish Bakshi, Kuntal Ghosh. **Lateral inhibition based holistic approach to adaptive image enhancement**, *IACC*, 2013.

AWARDS AND HONORS

- **Best Paper Runner-UP**, ICVGIP, 2022

- **IFCPAR/CEFIPRA Travel Grant** to visiton Thoth group, Inria, 2019

- **Google India Ph.D. Fellowship**, 2017 (*1 out of 4 recipients in India*)

- **ICMR Travel Grant** to attend ISBI, 2017

- **Junior Research Fellowship**, Awarded by MHRD in 2014, India

SKILLS

Programming Languages	Python (primary), C/C++, Bash
Deep Learning & CV Libraries	PyTorch, TorchVision, OpenCV, timm, PyTorchVideo
LLM / MLLM & GenAI Stack	Transformers, Diffusers, TRL, LLaMA-Factory
Data, Analysis & Visualization	NumPy, Pandas, SciPy, scikit-learn
Training, Scaling & Experimentation	PyTorch Distributed (DDP/FSDP), DeepSpeed
Systems, Tools & MLOps	Linux, Git, Docker, Conda/virtualenv, Slurm

ACADEMIC SERVICES

- Reviewer for CVPR, ECCV, ICCV, WACV, ICDAR, ICVGIP, TMI, JBHI, CIBM

- Coached a cohort of high-school students in computer vision for the International Olympiad in Artificial Intelligence (IOAI) 2025, with mentees performing exceptionally well.

- Mentored hands-on lab sessions in deep learning and computer vision at the CVIT Summer School, 2017–2024.

- Mentored hands-on lab sessions in CSEDU-ML faculty development programme, 2022.

MEDIA COVERAGE

One of my projects was featured on the official Meta Open Source YouTube channel (video).