# 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.

#### Senior Research Scientist

Jan 2024 - Aug 2024

Cognizer *Inc.* 

Hyderabad, India

- Developed solutions for Legal AI.
- Led a team of three researchers and one software engineer to develop cutting-edge enterprise solution in legal domain.

#### Research Scientist

Dec 2021 - Dec 2023

Hyderabad, India

Cognizer *Inc.* 

- Worked on a large-scale finetuning of Legal-BERT model.
- Developed a chatbot for seamless conversations between users and millions of legal contracts.

# 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).