

ABHINAV JAVA

Research Fellow, MICROSOFT RESEARCH

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RESEARCH EXPERIENCE

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| MICROSOFT RESEARCH, India Research Fellow with Amit Sharma , Nagarajan Natarajan , Srivathsan Koundinyan , Vineeth N Balasubramanian | 08/2024 – Present |
| UNIVERSITY OF VIRGINIA, Visiting Researcher with Chirag Agarwal | 03/2024 – 03/2025 |
| ADOBE RESEARCH, India Research Associate I, II with Balaji Krishnamurthy Research Intern with Balaji Krishnamurthy | 05/2021 – 08/2024 |
| MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Collaborator with Ayush Chopra , Ramesh Raskar | 03/2021 – 10/2022 |

EDUCATION

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| DELHI TECHNOLOGICAL UNIVERSITY, India B.Tech. in Computer Engineering > Research Excellence Award 2022. | 08/2018 – 07/2022 |
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PUBLICATIONS

* DENOTES JOINT FIRST AUTHORSHIP

UNDERSTANDING TASK TRANSFER IN VLMS

[Bhuvan Sachdeva](#)^{*}, [Karan Uppal](#)^{*}, [Abhinav Java](#)^{*}, [Vineeth N. Balasubramanian](#)
CVPR '26 (ORAL), UniReps@NeurIPS '25

CHARACTERIZING DEEP RESEARCH: A BENCHMARK AND FORMAL DEFINITION

[Abhinav Java](#)^{*}, [Ashmit Khandelwal](#)^{*}, [Sukruta Midigeshi](#)^{*}, [Aaron Halfaker](#), [Amit Deshpande](#), [Navin Goyal](#), [Ankur Gupta](#),
[Nagarajan Natarajan](#), [Amit Sharma](#)
ICLR '26, SEA@NeurIPS '25

FRUGALRAG: LESS IS MORE IN RL FINETUNING FOR MULTI-HOP QA

[Abhinav Java](#), [Srivathsan Koundinyan](#), [Nagarajan Natarajan](#), [Amit Sharma](#)
ICLR '26, ER@NeurIPS '25

TOWARDS OPERATIONALIZING RIGHT TO DATA PROTECTION

[Abhinav Java](#)^{*}, [Simra Shahid](#)^{*}, [Chirag Agarwal](#)
NAACL (Main) '25, MLDPR@ICLR '25

REEDIT: MULTIMODAL EXEMPLAR-BASED IMAGE EDITING

[Ashutosh Srivastava](#)^{*}, [Tarun Ram](#)^{*}, [Abhinav Java](#)^{*}, [Avadhoot Jadav](#), [Silky Singh](#), [Surgan Jandial](#), [Balaji Krishnamurthy](#)
WACV '25, AI4VA@ECCV '24

ALL SHOULD BE EQUAL IN THE EYES OF LMS: COUNTERFACTUALLY AWARE FAIR TEXT GENERATION

[Pragyan Banerjee](#)^{*}, [Abhinav Java](#)^{*}, [Surgan Jandial](#)^{*}, [Simra Shahid](#)^{*}, [Shaz Furniturewala](#), [Balaji Krishnamurthy](#), [Sumit Bhatia](#)
AAAI '24

THINKING FAIR AND SLOW: ON THE EFFICACY OF STRUCTURED PROMPTS FOR DEBIASING LANGUAGE MODELS

[Shaz Furniturewala](#), [Surgan Jandial](#), [Abhinav Java](#), [Pragyan Banerjee](#), [Simra Shahid](#), [Sumit Bhatia](#), [Kokil Jaidka](#)
EMNLP (Main) '24

ONE-SHOT DOC SNIPPET DETECTION: POWERING SEARCH IN DOCUMENTS BEYOND TEXT

[Abhinav Java](#), [Shripad Deshmukh](#), [Milan Agarwal](#), [Surgan Jandial](#), [Mausoom Sarkar](#), [Balaji Krishnamurthy](#)
WACV '23

LEARNING TO CENSOR BY NOISY SAMPLING

[Ayush Chopra](#), [Abhinav Java](#), [Abhishek Singh](#), [Vivek Sharma](#), [Ramesh Raskar](#)
ECCV '22

PATENTS

| | |
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| Relational Loss for Text based Style Transfer, US Patent 20250349050A1 . | 2025/11/13 |
| Personalized form error correction propagation, US Patent 12394236 . | 2025/08/19 |
| One Shot Doc Snippet Detection, US Patent 20250005048A1 . | 2025/01/02 |
| Form structure similarity detection, US Patent 12124497B1 . | 2024/10/22 |
| Systems and methods for data augmentation, US Patent 20240119122A1 . | 2024/04/11 |

FEATURED PROJECTS AND COLLABORATIONS

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| EFFICIENT MULTI-HOP REASONING FOR RETRIEVAL AUGMENTED GENERATION w/ Amit Sharma , Nagarajan Natarajan , Srivathsan Koundinyan | 08/2024 – Present Microsoft Research |
| <ul style="list-style-type: none">> Led the development of a project to create efficiently adaptable and low-latency RAG system with SLMs.> Proposed FrugalRAG: by learning efficient use of test-time compute using reinforcement learning> Improved latency and data efficiency by approximately 2x. | |
| RETHINKING TASKONOMY IN THE ERA OF LARGE VISION LANGUAGE MODELS w/ Vineeth N Balasubramanian | 04/2025 - Present Microsoft Research |
| <ul style="list-style-type: none">> Proposed a framework to study transferability of perception tasks in Vision-Language Models (VLMs).> Introduced a novel metric to quantify cross-task influence in VLM finetuning.> Revealed actionable insights – beneficial task cliques and transfer trends for effective finetuning strategies. | |
| A MODEL AGNOSTIC APPROACH TO CREATE UNLEARNABLE TEXT DATASETS w/ Chirag Agarwal | 03/2024 – 03/2025 University of Virginia |
| <ul style="list-style-type: none">> Developed the first model-agnostic, efficient unlearnable text data generation framework for user data privacy.> Proposed RegText: a mechanism to perturb sensitive datasets using information-theoretic insights.> Demonstrated that finetuning large models (e.g. GPT-4o) on our datasets drops performance below zero-shot! | |
| PROTECTING PRIVATE INFORMATION IN 3D POINT CLOUDS FOR PERCEPTION TASKS w/ Ayush Chopra , Ramesh Raskar | 03/2021 – 10/2022 Camera Culture, MIT Media Lab |
| <ul style="list-style-type: none">> Designed an approach to simplify the release of sensitive point cloud data with privacy protection.> Implemented CBNS: an end-to-end differentiable sampler and a novel loss to protect point clouds from adversaries.> Demonstrated improved privacy-utility tradeoffs with CBNS on perception tasks on 3D face datasets. | |

HONORS AND AWARDS

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| CVPR ORAL, 2026 | Research selected for Oral presentation at CVPR 2026. |
| ICLR TRAVEL GRANT, 2026 | Received travel grant for 1600 USD to present my research at ICLR'26 in Rio De Janeiro. |
| NEURIPS SCHOLAR AWARD, 2026 | Received travel grant to present my research at NeurIPS'26 in San Diego. |
| AAAI ORAL TALK, 2024 | Selected for an invited talk at AAAI 2024, Student Abstract Track. |
| RESEARCH EXCELLENCE AWARD, 2022 | Awarded for undergraduate research during undergrad (1 in approx 2000). |
| SEMESTER MERIT AWARD, 2021 | For securing University Rank 1 in the 5th Semester (1 in approx 2000). |
| JOINT ENTRANCE EXAMS, 2018 | Secured 99.28 percentile in Main and 96.78 percentile in Advanced (in 1.2 million). |
| NATIONAL TALENT SEARCH EXAM, 2017 | Qualified Stage 1 (Top 1% in 1.2 million). |

LEADERSHIP, INVITED TALKS, AND SERVICE

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| FIRESIDE CHAT, LiveDRBench . Plutos Dev | Fall 2025 |
| CAREER TALK, AI Summer School . Delhi Technological University | Summer 2025 |
| PRE-PLACEMENT TALK, Adobe Hiring . Delhi Technological University | Summer 2024 |
| TEAM UAS-DTU , Vice Captain, Software & Airframes Technician. | 2019 - 2020 |
| <ul style="list-style-type: none">> Secured a funding of \$1M from Adani Group for building Drone Swarm for disaster relief. (Media)> Awarded the best communication architecture prize of INR 250K in IAF National Competition. (Media) | |
| UMEED FOUNDATION , Volunteer. | 2022 - 2023 |
| <ul style="list-style-type: none">> Provided career counseling to college students, and assisted with interview preparation.> Taught middle school students basic science and mathematics during covid.> Awarded for my volunteering efforts by Adobe as one of the top 50 contributors. | |
| Reviewer: CVPR '26, ICLR '26, CVPR '25, KDD '24, CVPR'24, U&ME@ECCV'24, WACV'23, ECCV'22 | |