

Sadbhawna

CONTACT INFORMATION

Phone: +91 7807094887

E-mail: sadbhawnathakur@gmail.com

Website: <https://sadbhawnathakur.github.io/>

RESEARCH INTERESTS

Multimodal Large Language Models, Super-Resolution, Multimedia Perceptual Quality Assessment, Computer Vision, Deep Learning, Machine Learning, Image Processing.

WORKING

- (i) **Assistant Professor** January 2024 - Now
CSE & AIDE Department
Malaviya National Institute of Technology Jaipur
- (ii) **Institute Post-doc Fellow** May 2023 - January 2024
Indian Institute of Technology Madras
Project Title: Real-world Super Resolution.
- (iii) **Institute Early-doc Fellow** January 2023 - April 2023
Indian Institute of Technology Jammu
- (iv) **Research Intern** March 2022 - September 2022
K|Lens GmbH, Germany
Project Title: Video Super Resolution for real-world videos.

EDUCATION

- Indian Institute of Technology Jammu** July 2018 - January 2023
Ph.D. in Computer Science
Advised by (Dr. Vinit Jakhetiya)
(Coursework CGPA: 8.4/10)
- SLIET, Punjab (CFTI estd. by MHRD, India)** July 2016-June 2018
M.Tech. in Computer Science
(CGPA: 8.2/10)
- ABVGIET, Shimla, Himachal Pradesh** July 2012-June 2016
State Govt. College Affiliated to HPTU
B.Tech. in Computer Science
(Percentage: 74.5 %)

OTHER QUALIFICATIONS

UGC-NET, 2018, and GATE 2016, 2018 Qualified.

RESEARCH PROJECTS

| Title | Total Outlay (In Lacs) | Year | Funding Agency | Role |
|---|------------------------|-----------|----------------|------|
| INDIC-MMR Multimodal Instruction Tuning for Indian Cultural, Linguistic, and Visual Reasoning | 50.3 | 2026–2029 | ANRF | PI |

ACHIEVEMENTS

- (i) Received Young Women Scientist Award for computational resources worth Rs. 5 Lacs from IIT(BHU).
- (ii) Received Ph.D. Industrial Exposure Fellowship offered by Indo-German Science & Technology Centre (IGSTC). Link: https://www.igstc.org/home/industrial_fellows_2021
- (iii) Received prize money worth 600 USD sponsored by GOOGLE for ICASSP SPGC 2021
- (iv) Runner Up Team in IEEE ICASSP 2021 Signal Processing Grand Challenge (SPGC) on COVID-19 Diagnosis

PUBLICATIONS

JOURNALS:

- (i) Stretching Artifacts Identification for Quality Assessment and Enhancement of 3D-Synthesized Views. Published, IEEE Transactions on Image Processing , 2022 **CORE: A***, (**IF: 11.041**)
(Link: <https://ieeexplore.ieee.org/document/9697977>)
Sadbhawna, Vinit Jakhethiya, Sharath C. Guntuku, Deebha Mumtaz, Badri N. Subudhi
- (ii) Perceptually Unimportant Information Reduction and Cosine Similarity-based Quality Assessment of 3D-Synthesized Images. Published, IEEE Transactions on Image Processing, 2022 **CORE: A***, (**IF: 11.041**)
(Link: <https://ieeexplore.ieee.org/document/9714223>)
Sadbhawna, Vinit Jakhethiya, Shubham Chaudhary, Sharath C. Guntuku, Badri N. Subudhi, Weisi Lin
- (iii) Context Region Identification based Quality Assessment of 3D Synthesized Views. Published, IEEE Transactions on Multimedia , 2022 **CORE: A***, (**IF: 8.182**)
(Link: <https://ieeexplore.ieee.org/document/9891833>)
Sadbhawna, Vinit Jakhethiya, Badri N. Subudhi, Sunil P. Jaiswal, Leida Li, Weisi Lin
- (iv) Non-Subsampled Contourlet Transform and Ground-truth Score Generation based Quality Assessment for DIBR-Synthesized Views. Published, IEEE Transactions on Multimedia, 2024 **CORE: A***, (**IF: 8.182**)
(Link: <https://ieeexplore.ieee.org/abstract/document/10458998>)
Deebha Mumtaz, **Sadbhawna**, Vinit Jakhethiya, Badri N. Subudhi, Weisi Lin (IEEE Fellow)

CONFERENCES:

- (i) Improving Reasoning in Vision-Language Models via Perception Verified Self-Training
Accepted, The 19th European Conference on Computer Vision (ECCV) 2026 **CORE: A***
Sourabh Sharma, Sonam Gupta, **Sadbhawna**
- (ii) See, Think, Learn: A Self-Taught Multimodal Reasoner
Published, The IEEE/CVF Winter Conference on Applications of Computer Vision 2026 **CORE: A** (Link: <https://arxiv.org/html/2512.02456v1>)
Sourabh Sharma, Sonam Gupta, **Sadbhawna**
- (iii) Detecting COVID-19 and Community-Acquired Pneumonia using Chest CT Scan Images with Deep Learning.
Published, IEEE ICASSP 2021 **CORE: B**
(Link: <https://ieeexplore.ieee.org/document/9414007>)
Shubham Chaudhary, **Sadbhawna**, Vinit Jakhethiya, Badri N. Subudhi, Ujjwal Baid, Sharath C. Guntuku

- (iv) Distortion Specific Contrast Based No Reference Quality Assessment of DIBR-Synthesized Views.
Published, IEEE MMSP 2020 **CORE: B**
(Link: <https://ieeexplore.ieee.org/document/9287088>)
Sadbhawna, Vinit Jakhethiya, Deebha Mumtaz, Sunil Jaiswal

WORKSHOPS:

- (i) Expanding Synthetic Real-World Degradations for Blind Video Super Resolution.
Accepted, IEEE/CVF Computer Vision and Pattern Recognition Workshops 2023 **CORE: A***
(Link: <https://arxiv.org/abs/2305.02660>)
Mehran Jeelani*, **Sadbhawna***, Noshaba Cheema, Klaus Illgner, Philipp Slusallek, Sunil Jaiswal
- (ii) Do we need a new large-scale quality assessment database for Generative Inpainting based 3D View Synthesis?
(Student Abstract).
Published, AAAI Conference, 2022 **CORE: A***
(Link: <https://www.aaai.org/AAAI22Papers/SA-00426-Sadbhawna.pdf>)
Sadbhawna, Vinit Jakhethiya, Sharath C. Guntuku, Deebha Mumtaz, Badri N. Subudhi

COLLABORATORS

- (i) **Dr. Sonam Gupta** (<https://scholar.google.com/citations?user=nIJUdr0AAAAJhl=en>)
Researcher,
IBM Research Labs, India
- (ii) **Dr. Vinit Jakhethiya** (<https://sites.google.com/view/vinitjakhethiya/home>)
Assistant Professor (Ph.D. Supervisor)
Computer Science and Engineering Department
Indian Institute of Technology Jammu
- (iii) **Prof. Weisi Lin** (<https://personal.ntu.edu.sg/wslin/Home.html>)
Associate Chair (Research)
School of Computer Science and Engineering
Nanyang Technological University, Singapore
- (iv) **Dr. Sharath Chandra Guntuku** (<https://sharathg.cis.upenn.edu/>)
Research Assistant Professor
Computer Science x Psychology and Health Research
University of Pennsylvania, US
- (v) **Dr. Sunil P. Jaiswal** (<https://spjaiswal.github.io/>)
Head R & D,
K|Lens GmbH, Germany

REVIEWER

- (i) IEEE Transactions on Neural Networks and Learning Systems, IEEE Transactions on Image Processing, IEEE Transactions on Multimedia, IEEE Signal Processing Letters
- (ii) CVPR'24'25'26, ECCV'24, ICCV'25, ACM MM'23'24'25, BMVC'25

SERVICE AND LEADERSHIP

- (i) **Warden**
Gargi Hostel, MNIT Jaipur (October 2024-Now)
- (ii) **Technical Team, Faculty Advisor**
Newsletter, MNIT
- (iii) **Member**
Exam Cell, MNIT
- (iv) **WIE Chapter Faculty Advisor**
MNIT IEEE Student Branch
- (v) **Coordinator-Social Media and Website**
AIDE Department

- (vi) **Program Advisor (2024-2028 batch)**
AIDE Department
- (vii) **Coordinator–Social Media**
CSE Department
- (viii) **Verifying Officer**
CSAB Counseling
- (ix) **Assistant Warden**
Sabarmati Hostel, IIT Madras
- (x) **Invited Talks at IIT Jammu**
Talk 1: Various fellowship opportunities for Masters/Ph.D. Students.
Talk 2: Learn to host your own GitHub Website.
- (xi) **Machine Learning Workshop Organizer**
IIT Jammu
- (xii) **Graduate Admissions: CSE, IIT Jammu**
Reviewed applications for AI Research Area