

Sadbhawna

CONTACT INFORMATION

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RESEARCH INTERESTS

Super-Resolution, Multimedia Perceptual Quality Assessment, Computer Vision, Deep Learning, Machine Learning, Image Processing, Medical Image Analysis.

WORKING

- (i) **Assistant Professor** January 2024 - Now
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 %)

TECHNICAL COURSEWORK

- (i) **Digital Image Analysis**
At Indian Institute of Technology, Delhi
taught by Prof. Prem Kumar Kalra
- (ii) **Computer Vision**
At Indian Institute of Technology, Delhi
taught by Prof. Brejesh Lall

- (iii) **Principles of Optimization Theory**
At Indian Institute of Technology, Bombay
taught by Prof. Virender Singh
- (iv) **Pattern Recognition and Machine Learning**
At Indian Institute of Technology, Jammu
taught by Dr. Badri Narayan Subudhi

OTHER QUALIFICATIONS

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

ACHIEVEMENTS

- (i) **Received Ph.D. Industrial Exposure Fellowship offered by Indo-German Science & Technology Centre (IGSTC). Link: https://www.igstc.org/home/industrial_fellows_2021**
- (ii) **Received prize money worth 600 USD sponsored by GOOGLE for ICASSP SPGC 2021**
- (iii) **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 Jakhetya, 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 Jakhetya, 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 Jakhetya, 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.**
Accepted, IEEE Transactions on Multimedia, 2024 **CORE: A***, (**IF: 8.182**)
Deebha Mumtaz, **Sadbhawna**, Vinit Jakhetya, Badri N. Subudhi, Weisi Lin (IEEE Fellow)

CONFERENCES:

- (i) **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 Jakhetya, Badri N. Subudhi, Ujjwal Baid, Sharath C. Guntuku
- (ii) **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 Jakhetya, 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 Jakhetiya, Sharath C. Guntuku, Deebha Mumtaz, Badri N. Subudhi

PRE-PRINTS

- (i) **RealVQA-DDSR: Real World Video Quality Assessment assisted Joint Motion Deblurring, Denoising, and Super-Resolution**
Ajeet Verma, Sheikh Faizan*, Ambuj Mishra*, **Sadbhawna**, Sunil P. Jaiswal, Vinit Jakhetiya

ACTIVE COLLABORATORS

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

TEACHING ASSISTANCE

- (i) **Computer Vision** Jan 2020-July 2020
IIT Jammu
Teaching Assistant with Dr. Vinit Jakhetiya (Assistant Professor)
- (ii) **Design and Analysis of Algorithms** July 2019-Dec 2019
IIT Jammu
Teaching Assistant with Prof. Devesh C. Jhinwala

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, ACM MM '23, ICASSP

SERVICE AND LEADERSHIP

- (i) **Assistant Warden**
Sabarmati Hostel, IIT Madras
- (ii) **Invited Talks at IIT Jammu**
Talk 1: Various fellowship opportunities for Masters/Ph.D. Students.
Talk 2: Learn to host your own GitHub Website.
- (iii) **Machine Learning Workshop Organizer**
IIT Jammu

- (iv) **Graduate Admissions: CSE, IIT Jammu**
Reviewed applications for AI Research Area