

Sadbhawna

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Website: <https://sadbhawnathakur.github.io/>
Computer Science and Engineering Department
Indian Institute of Technology Jammu, India

OBJECTIVE

Result focused and creative thinker, seeking to work on exciting projects and real world research problems in the field of computer vision and deep learning, develop analytical thinking, team work, leadership skills.

RESEARCH INTERESTS

Visual Perception, Multimedia Perceptual Quality, Deep Learning, Machine Learning, Computer Vision, Image Processing, Quality Enhancement, Quality Assessment, Artificial Intelligence, 3D-Synthesis.

WORKING

Indian Institute of Technology Jammu
Institute Early-doc Fellow

9 January 2023 - Now

EDUCATION

Indian Institute of Technology Jammu
Ph.D. in Computer Science

July 2018 - 7 January 2023

Advised by Dr. Vinit Jakhetiya (<https://sites.google.com/view/vinitjakhetiya/home>)
(Coursework CGPA: 8.4/10)

SLIET, Punjab (CFTI estd. by MHRD, India)
M.Tech. in Computer Science
(CGPA: 8.2/10)

July 2016-June 2018

ABVGIET, Shimla, Himachal Pradesh
State Govt. College Affiliated to HPTU
B.Tech. in Computer Science
(Percentage: 74.5 %)

July 2012-June 2016

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**
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) **Context Region Identification based Quality Assessment of 3D Synthesized Views**
Published, IEEE Transactions on Multimedia, 2022
(Link: <https://ieeexplore.ieee.org/document/9891833>)
Sadbhawna, Vinit Jakhetiya, Badri N. Subudhi, Sunil P. Jaiswal, Leida Li, Weisi Lin
- (ii) **Shift Compensation and Cosine Similarity based Quality Assessment of 3D-Synthesized Images.**
Published, IEEE Transactions on Image Processing, 2021
(Link: <https://ieeexplore.ieee.org/document/9714223>)
Sadbhawna, Vinit Jakhetiya, Shubham Chaudhary, Sharath C. Guntuku, Badri N. Subudhi, Weisi Lin
- (iii) **Stretching Artifacts Identification for Quality Assessment and Enhancement of 3D-Synthesized Views.**
Published, IEEE Transactions on Image Processing, 2021
(Link: <https://ieeexplore.ieee.org/document/9697977>)
Sadbhawna, Vinit Jakhetiya, Sharath C. Guntuku, Deebha Mumtaz, Badri N. Subudhi

CONFERENCES:

- (i) **Expanding Synthetic Real-World Degradations for Blind Video Super Resolution**
Accepted, IEEE/CVF Computer Vision and Pattern Recognition Workshops 2023
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
(Link: <https://www.aaai.org/AAAI22Papers/SA-00426-Sadbhawna.pdf>)
Sadbhawna, Vinit Jakhetiya, Sharath C. Guntuku, Deebha Mumtaz, Badri N. Subudhi
- (iii) **Detecting COVID-19 and Community-Acquired Pneumonia using Chest CT Scan Images with Deep Learning**
Published, IEEE ICASSP 2021
(Link: <https://ieeexplore.ieee.org/document/9414007>)
Shubham Chaudhary, **Sadbhawna**, Vinit Jakhetiya, 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
(Link: <https://ieeexplore.ieee.org/document/9287088>)
Sadbhawna, Vinit Jakhetiya, Deebha Mumtaz, Sunil Jaiswal

SUBMITTED

- (i) **Non-Subsampled Contourlet Transform and Ground-truth Score Generation based Quality Assessment for DIBR-Synthesized Views**
Under review, IEEE Transactions on Multimedia
Deebha Mumtaz, **Sadbhawna**, Vinit Jakhetiya, Badri N. Subudhi, Weisi Lin (IEEE Fellow)

WORKING EXPERIENCE

- (i) **Research Intern** March 2022 - September 2022
Supervisor: Dr. Sunil Jaiswal
Head, R&D, KLens GmbH
Am Romerkastell 4, Saarbrücken, Germany
Project Title: Video Super Resolution for real-world videos.

ACTIVE COLLABORATORS

- (i) **Prof. Weisi Lin (Webpage Link: <https://personal.ntu.edu.sg/wslin/Home.html>)**
Associate Chair (Research)
School of Computer Science and Engineering
Nanyang Technological University, Singapore
- (ii) **Dr. Sharath Chandra Guntuku (Webpage Link: <https://sharathg.cis.upenn.edu/>)**
Research Assistant Professor
University of Pennsylvania, US
- (iii) **Dr. Sunil P. Jaiswal (Webpage Link: <https://spjaiswal.github.io/>)**
Head R & D,
KLens GmbH, Germany

TEACHING EXPERIENCE

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

SERVICE AND LEADERSHIP

- (i) **Machine Learning Workshop Organizer**
Indian Institute of Technology, Jammu
- (ii) **Graduate Admissions: CSE, IIT Jammu**
Reviewed applications for AI Research Area