Rajeev Ranjan Dwivedi

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EDUCATION

PhD - DATA SCIENCE & ENGINEERING   Bhopal, MP, IN | August 2022 - Present
TCS Research Fellow
VisDom Lab - Indian Institute of Science Education and Research (IISER) Bhopal
Advisor : Dr. Vinod Kr. Kurmi
Research Area: Bias and Fairness in AI, Transfer Learning, Knowledge Graph and LLMs, Uncertainty Estimation

INTEGRATED M.Sc. STATISTICS   Ajmer, RJ, IN | July 2016 - August 2021
Central University of Rajasthan
Master's Thesis : Proposed new distribution function - **Skew Laplace Slash Beta** from Slash Family of distribution which is asymmetric, heavy tailed and accounts for extreme values and outliers.

INTERMEDIATE - Class 12th   Gonda, UP, IN | May 2015
Fatima Senior Secondary School

WORK EXPERIENCE

SONY AI | Research Intern   Full Time | Dec 2023 - March 2024

- Working on explainability with LLMs over Knowledge Graphs for Scientific Discovery.
- Finding efficient path-based approaches for graph traversal and node accountability (non-statistical approaches).

PUBLICATIONS

REGULATING INTERNAL EVIDENCE FLOWS FOR BIAS MITIGATION*
Submitted to ICLR 2026 (Core $A^\star$)

BLACKBOX BIAS MITIGATION WITH REPRESENTATION SPACE PERTURBATIONS*
Submitted to CVPR 2026 (Core $A^\star$)

HISTOGRAM ASSISTED QUALITY AWARE GENERATIVE MODEL FOR RESOLUTION INVARIANT NIR IMAGE COLORIZATION
Accepted at WACV 2026 (Core A) [Project Page]

MULTI-ATTRIBUTE BIAS MITIGATION VIA REPRESENTATION LEARNING
Accepted at ECAI 2025 (Core A) [Project Page]

GRAD-CL: SOURCE FREE DOMAIN ADAPTATION WITH GRADIENT GUIDED FEATURE DISALIGNMENT
Accepted at BMVC 2025 (Core A) [Project Page]

COSFAIRNET: A PARAMETER-SPACE BASED APPROACH FOR BIAS FREE LEARNING
Accepted at BMVC 2024 (Core A) [Project Page]

QUANTIFYING UNCERTAINTY IN NEURAL NETWORKS THROUGH RESIDUALS
Accepted at CIKM 2024 (Core A) [Project Page]

PREDICTING MISSING LIGHT CURVES OF GAMMA-RAY BURSTS WITH BIDIRECTIONAL-LSTM: AN APPROACH FOR ENHANCED ANALYSIS
Accepted at SPAICE 2024, ECSAT, UK [Project Page]

EQUITABLE DERMATOLOGY: ADVERSARIAL AND SPECTRAL TECHNIQUES FOR FAIR SKIN LESION CLASSIFICATION
Accepted at ICVGIP 2025

OPERATING-POINT FAIRNESS IN DERMATOLOGY FOUNDATION MODELS: A MULTI-DATASET AUDIT OF SKIN-TONE DISPARITIES AND THRESHOLD TRANSFER

BRIDGING STYLE AND FUNCTION: EVALUATING THE ROLE OF STYLE FEATURES IN VISION MODELS
UNDER REVIEW AT NEUROCOMPUTING

FAIRSPEECH - DEBIASING WITH FINE-GRAINED SELF ALLOCATING CLUSTERS*
UNDER REVIEW AT SOFT-COMPUTING

PROJECTS

WEAKLY-SCRIBBLE-SUPERVISED CAMOUFLAGED OBJECT DETECTION   PYTHON, PYTORCH
Worked on developing a weakly-supervised camouflaged object detection method using scribble annotations and a new network architecture with modules that use semantic and in-out class information for segmentation.

DEBIASING A NETWORK USING SIMULTANEOUS TRAINING OF TWO NETWORKS   FAIR LEARNING, PYTHON, PYTORCH, BIAS-FREE LEARNING
The project proposes a debiasing method where one model is trained to be biased, and another model learns to avoid making the same mistakes by using the biased model for debiasing.

IRIS LOCALIZATION AND RECOGNITION USING DEEP LEARNING   CV2, PYTORCH, BIOMETRIC
Developed an unsupervised approach for iris localization, extraction, and recognition in non-ideal scenarios, improving the accuracy and robustness of iris recognition systems.

COURSEWORK

Deep Learning, Machine Learning, Natural Language Processing, Spatial Data Science, Data Science in Biometric Systems, Probability Theory, Distribution Theory, Econometrics, Linear Algebra, Real Analysis, Linear Models, Stochastic Models, Inference, Time Series Analysis, Multivariate Statistics, Development Statistics, Statistical Quality Control, Statistical Quality Management, Sampling Theory.

ACTIVITIES, INTERESTS & AWARDS

- Received a travel grant to present at **ConfAI**, Plaksha University, and deliver a talk on *Multibias Mitigation*.
- Awarded a student grant to attend the Graduate Forum at **IndoML'25** (December 2025).
- Selected for the prestigious **TCS Research Scholar Program (RSP)** (July 2024).
- Awarded **Prof. Ram Kumar Fellowship** (July'24) for attending GAME-ARTS, **IISc Bangalore**
- Awarded student grant for attending **IndoML'23** at IIT-Bombay. (December'23)
- Attended 7th Summer School on AI at CVIT, IIIT-Hyderabad (July'23)
- Attended SERB Funded Workshop on Synergizing Healthcare Services and Affective Computing using Deep Learning at IIT Indore (July'23)
- Recipient of the **ACM Anveshan Setu Fellowship** (2023).
- **University Student Head** of Institute Innovation Council (IIC) - an initiative of MHRD (Ministry of Human Resource and Development) for fostering innovations in intuitions.
- Initiated University Magazine **ASTITVA** and worked as Chief Editor for 2 consecutive years.

AREA OF INTEREST

Fair Learning, Domain Adaptation, Computer Vision, Deep Learning, Statistical Machine Learning, Knowledge Graphs, LLMs, Agentic AI, Sustainable Solutions and AI.

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* Title of paper(in Publications) is changed and simplified to maintain the anonymity of submission.

[Last Updated 11th December 2025]