

Publications

Journals:

1. Kousik Sarkar and Soumen Bag, "Axial Self-Similarity based modular Noise2Noise for progressive LDCT denoising without ground truth", Medical & Biological Engineering & Computing, Springer, 2026 (DOI: 10.1007/s11517-026-03565-5 (in Press)).
2. Kousik Sarkar, Soumen Bag, and Prasun Chandra Tripathi, "Noise Aware Content-noise Complementary GAN with Local and Global Discrimination for Low-dose CT Denoising", Neurocomputing, Elsevier, vol. 582, article no. 127473, 2024.
3. Prasun Chandra Tripathi and Soumen Bag, "An Attention-guided CNN Framework for Segmentation and Grading of Glioma using 3D MRI Scans", IEEE/ACM Transactions on Computational Biology and Bioinformatics, IEEE, vol. 20, no. 3, pp. 1890–1904, 2023.
4. Priyanka Roy and Soumen Bag, "Ink Analysis based Forensic Investigation of Handwritten Legal Documents", Multimedia Tools and Applications, Springer, vol. 81, pp. 23001–23047, 2022.
5. Prabhat Dansena, Soumen Bag, and Rajarshi Pal, "Pen Ink Discrimination in Handwritten Documents using Statistical and Motif Texture Analysis: A classification based Approach", Multimedia Tools and Applications, Springer, vol. 81, pp. 30881–30909, 2022.
6. Prasun Chandra Tripathi and Soumen Bag, "A Computer-aided Grading of Glioma Tumor using Deep Residual Networks Fusion", Computer Methods and Programs in Biomedicine, Elsevier, vol. 215, article no. 106597, 2022.
7. Deepika Gupta and Soumen Bag, "Holistic versus Segmentation-based Recognition of Handwritten Devanagari Conjunct Characters: A CNN-based Experimental Study", Neural Computing and Applications, Springer, vol. 34, pp. 5665–5681, 2022.
8. Anuja Dixit and Soumen Bag, "Adaptive Clustering-based Approach for Forgery Detection in Images Containing Similar Appearing but Authentic Objects", Applied Soft Computing, vol. 113, part A, article no. 107893, Elsevier, 2021.
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10. Rahul Pramanik and Soumen Bag, "A Novel Skew Correction Methodology for Handwritten Words in Multilingual Multi-oriented Documents", Multimedia Tools and Applications, Springer, vol. 80, pp. 27323–27342, 2021.
11. Rahul Pramanik and Soumen Bag, "Handwritten Bangla City Name Word Recognition using CNN-based Transfer Learning and FCN", Neural Computing and Applications, Springer, vol. 33, pp. 9329–9341, 2021.
12. Prabhat Dansena, Soumen Bag, and Rajarshi Pal, "Generation of Synthetic Data for Handwritten Word Alteration Detection", IEEE Access, IEEE CS Press, vol. 9, pp. 38979–38990, 2021.
13. Deepika Gupta and Soumen Bag, "CNN-based Multilingual Handwritten Numeral Recognition: A Fusion-free Approach", Expert Systems with Applications, vol. 165, article no. 113784, Elsevier, 2021.

14. Anuja Dixit and Soumen Bag, "Composite Attacks-based Copy-move Image Forgery Detection using AKAZE and FAST with Automatic Contrast Thresholding", IET Image Processing, IET Digital Library, vol. 14, no. 17, pp. 4528–4542, 2020.
15. Prasun Chandra Tripathi and Soumen Bag, "Segmentation of Brain Magnetic Resonance Images using a Novel Fuzzy Clustering based Method", IET Image Processing, IET Digital Library, vol. 14, no. 15, pp. 3705–3717, 2020.
16. Anuja Dixit and Soumen Bag, "Utilization of Edge Operators for Localization of Copy-move Image Forgery using WLD-HOG Features with Connected Component Labeling", Multimedia Tools and Applications, vol. 79, pp. 26061–26097, Springer, 2020.
17. Prasun Chandra Tripathi and Soumen Bag, "CNN-DMRI: A Convolutional Neural Network for Denoising of Magnetic Resonance Images", Pattern Recognition Letters, vol. 135, pp. 57–63, Elsevier, 2020.
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19. Rahul Pramanik and Soumen Bag, "A Segmentation-based Recognition System for Handwritten Bangla and Devanagari Words using Conventional Classification and Transfer Learning", IET Image Processing, vol. 14, no. 5, pp. 959–972, IET Digital Library, 2020.
20. Deepika Gupta and Soumen Bag, "Handwritten Multilingual Word Segmentation using Polygonal Approximation of Digital Curves for Indian Languages", Multimedia Tools and Applications, Springer, vol. 78, no. 14, pp. 19361–19386, 2019.
21. Rahul Pramanik and Soumen Bag, "Shape Decomposition-based Handwritten Compound Character Recognition for Bangla OCR", Journal of Visual Communication and Image Representation, Elsevier, vol. 50, pp. 123–134, 2018.
22. Soumen Bag and Partha Bhowmick, "Adaptive-interpolative Binarization with Stroke Preservation for Restoration of Faint Characters in Degraded Documents", Journal of Visual Communication and Image Representation, Elsevier, vol. 31, pp. 266–281, 2015.
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2. Banty Jha, Prabhat Dansena, Ashish Ranjan, and Soumen Bag, "*Writer Folded Artifact Removal in Document Images via Lightness Channel Simulation and Conditional GAN Restoration*", 1st International Conference on Intelligent Computing, Cognitive Networks, and Smart Systems (IC2NS2), Springer-LNNS, Bhubaneswar, India, Jan 30–31, 2026 (accepted).
3. Prabhat Dansena, Akash Sinha, Soumen Bag, and Kousik Sarkar, "*Writer Authentication using Different Structural and Geometrical Features: An Application Towards Handwritten Document Forensics*", Workshop of Handwritten Document Forensics: Challenges, advances and Applications (HDF) in conjunction with Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP), ACM Digital Library, Mandi, India, Dec 17–20, 2025 (accepted).
4. Sajal Kumar Pramanik and Soumen Bag, and Ayan Das, "*S-GLAM: Bridging local and global attention using simple convolutions for multistage glaucoma detection*", 10th International Conference on Computer Vision and Image Processing (CVIP), Springer-CCIS, Ropar, Dec 10–13, 2025 (accepted).
5. Kousik Sarkar and Soumen Bag, and Ayan Das, "*A Modular Framework for Gradual LDCT Denoising Using Noisy Data Only*", 7th IEEE International Conference on Artificial Intelligence in Engineering and Technology (IEEE IICAET), IEEE, pp. 555–560, Kota Kinabalu, Malaysia, Aug 26–28, 2025.
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12. Shraddha Wankhade, Anuja Dixit, and Soumen Bag, "*A Fast and Rigid Copy Move Forgery Detection Technique using HDBSCAN*", 4th International Conference on Computer Vision and Image Processing (CVIP), vol. 1147, pp. 15–24, Springer-CCIS, Jaipur, India, Sep 27–29, 2019.
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15. Prasun Chandra Tripathi and Soumen Bag, "*Non-Invasively Grading of Brain Tumor through Noise Robust Textural and Intensity based Features*", 1st International Conference on Computational Intelligence in Pattern Recognition (CIPR), Springer-AISC, vol. 999, pp. 531–539, Shibpur, India, Jan 19–20, 2019.
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19. Arkajyoti Mitra, Prasun Chandra Tripathi, and Soumen Bag, "*Identification of Astrocytoma Grade using Intensity, Texture, and Shape based Features*", 8th International Conference on Soft Computing for Problem Solving (SocProS), Springer-AISC, vol. 1048, pp. 455–465, Vellore, India, Dec 17–19, 2018.
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Book Chapter:

1. Soumen Bag, "*A nearest opposite contour pixel based thinning strategy for character images*", Feature Detectors and Motion Detection in Video Processing, Chapter 6, pp. 123–140, N. Dey, A. Ashour, P.K. Patra (Ed.), IGI Global, USA, 2017.

Monograph:

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