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Publications

(Last Updated: July 3, 2026)

■ Journal Papers ■ Conference Papers ■ Monograph

Monograph

- [B1] Ananda S. Chowdhury and **Abhimanyu Sahu**. *Graph Based Multimedia Analysis*. Morgan Kaufmann / Elsevier, 2024, ISBN 978-0-443-21495-0.

International Journal Papers

- [J11] P. K Vishwakarma, D.K Singh, and **Abhimanyu Sahu**. “DEFT-DPT: A Lightweight Multimodal Framework for Egocentric Video Action Recognition”. *IEEE Trans. Circuits Syst. Video Technol. (TCSVT)*, 2026, DOI: [10.1109/TCSVT.2026.3707206](https://doi.org/10.1109/TCSVT.2026.3707206) (SCI, IF: 10.8, Q1).
- [J10] T Mita Kumari, **Abhimanyu Sahu**, and Dinesh Kumar Dash. “Multi-Attention Transformer Framework for Human Action Recognition”. *Advanced Engineering Sciences*, Vol. 58, pp. 1412–1428, 2026 (Scopus Index).
- [J9] A. Mukherjee, J. Sil, **Abhimanyu Sahu**, and A.S. Chowdhury. “Patch based Unsupervised Deep Learning for Retrieval and Part Matching in Large Image Datasets”. *IEEE Trans. Big Data (TBD)*, Vol. 11, pp. 3369–3382, 2025, DOI: [10.1109/TBDDATA.2025.3594237](https://doi.org/10.1109/TBDDATA.2025.3594237) (SCI, IF: 8.1, Q1).
- [J8] **Abhimanyu Sahu** and Ananda S. Chowdhury. “Egocentric video co-summarization using transfer learning and refined random walk on a constrained graph”. *Pattern Recognit. (PR)*, Vol. 134, pp. 109–128, 2022, DOI: [10.1016/j.patcog.2022.109128](https://doi.org/10.1016/j.patcog.2022.109128) (SCI, IF: 9.1, Q1).
- [J7] **Abhimanyu Sahu** and Ananda S. Chowdhury. “Together Recognizing, Localizing and Summarizing Actions in Egocentric Videos”. *IEEE Trans. Image Process. (TIP)*, Vol. 30, pp. 4330–4340, 2021, DOI: [10.1109/TIP.2021.3070732](https://doi.org/10.1109/TIP.2021.3070732) (SCI, IF: 15.3, Q1).
- [J6] **Abhimanyu Sahu** and Ananda S. Chowdhury. “First Person Video Summarization Using Different Graph Representations”. *Pattern Recognit. Lett. (PRL)*, Vol. 146, pp. 185–192, 2021, DOI: [10.1016/j.patrec.2021.03.013](https://doi.org/10.1016/j.patrec.2021.03.013) (SCI, IF: 3.5, Q1).
- [J5] Partha Pratim Sarangi, **Abhimanyu Sahu**, Madhumita Panda, and Bhabani Shankar Prasad Mishra. “Automatic Ear Localization Using Entropy-Based Binary Jaya Algorithm and Weighted Hausdorff Distance”. *Int. J. Swarm Intell. Res. (IJSIR)*, Vol. 12, No. 1, pp. 50–76, 2021, DOI: [10.4018/IJSIR.2021010104](https://doi.org/10.4018/IJSIR.2021010104) (Scopus Index).
- [J4] **Abhimanyu Sahu** and Ananda S. Chowdhury. “Summarizing Egocentric Videos using Deep Features and Optimal Clustering”. *Neurocomputing*, Vol. 398, pp. 209–221, 2020, DOI (SCI, IF: 6.7, Q1).

- [J3] **Abhimanyu Sahu** and Ananda S. Chowdhury. “Multiscale Summarization and Action Ranking in Egocentric Videos”. *Pattern Recognit. Lett. (PRL)*, Vol. 133, pp. 256–263, 2020, DOI: [10.1016/j.patrec.2020.02.029](https://doi.org/10.1016/j.patrec.2020.02.029) (SCI, IF: 3.5, Q1).
- [J2] Anindita Mukherjee, Jaya Sil, **Abhimanyu Sahu**, and Ananda S. Chowdhury. “A Bag of Constrained Informative Deep Visual Words for Image Retrieval”. *Pattern Recognit. Lett. (PRL)*, Vol. 129, pp. 158–165, 2020, DOI: [10.1016/j.patrec.2019.11.011](https://doi.org/10.1016/j.patrec.2019.11.011) (SCI, IF: 3.5, Q1).
- [J1] Partha Pratim Sarangi, **Abhimanyu Sahu**, and Madhumita Panda. “A hybrid differential evolution and back-propagation algorithm for feedforward neural network training”. *Int. J. Comput. Appl. (IJCA)*, Vol. 84, No. 14, pp. 1–9 (Scopus Index).

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- [C15] Rohit Shrivastava, Pawanesh Kumar Vishwakarma, and **Abhimanyu Sahu**. “Content-Aware Video Summarization via Peak-Driven Adaptive Segmentation”. *11th International Conference on Computer Vision & Image Processing (CVIP 2026)*, NIT Calicut and NTNU Norway (Accepted).
- [C14] Sricheta Parui, Rakesh Kumar Rai, Pawanesh Kumar Vishwakarma, Dushyant Kumar Singh, and **Abhimanyu Sahu**. “SYNAPSE: Symmetric Neurograph Augmentation via Probabilistic diffusion Learning for fMRI-based ADHD Identification”. *4th International Workshop on Artificial Intelligence for Healthcare Applications (AIHA, ICPR 2026)*, Lyon, France, August 17–22, 2026 (Accepted).
- [C13] Pawanesh Kumar Vishwakarma, Ananda S. Chowdhury, and **Abhimanyu Sahu**. “Ego-HAnG: Graph-Enhanced Horizon Aware Egocentric Action Anticipation”. *28th International Conference on Pattern Recognition (ICPR 2026)*, Lyon, France, August 17–22, 2026 (Accepted).
- [C12] Sevakram T. Kumbhare, **Abhimanyu Sahu**, and Ananda S. Chowdhury. “A Deep Graph Model for Smart Homes”. *10th International Conference on Computer Vision & Image Processing (CVIP 2025)*, IIT Ropar (Accepted).
- [C11] Shruti Pallawi, Dushyant Kumar Singh, and **Abhimanyu Sahu**. “Deep Learning based anatomical brain segmentation and classification of Alzheimer’s stages using multi-facet features”. *International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR 2025)*, Bali, Indonesia, July 12–15, 2025 (Accepted).
- [C10] Pawanesh Kumar Vishwakarma, Dushyant Kumar Singh, and **Abhimanyu Sahu**. “Action recognition from egocentric videos using RGB + Depth modalities”. *6th International Conference on Recent Advances in Information Technology (RAIT 2025)*, IIT (ISM) Dhanbad, 2025. DOI: [10.1109/RAIT65068.2025.11089208](https://doi.org/10.1109/RAIT65068.2025.11089208)
- [C9] T Mita Kumari, Dinesh Kumar Dash, and **Abhimanyu Sahu**. “An Efficient Video Summarization Using Sparse Auto-encoders and K-means Clustering on Video Similarity Graph”. *22nd OITS International Conference on Information Technology (OCIT 2024)*, 2024.
- [C8] A. M. Shrivastava, D. K. Singh, R. Jain, S. S. Chandel, and **Abhimanyu Sahu**. “Enhanced ConvLSTM with hierarchical attention scheme for unusual activity detection in classrooms or laboratories”. *Proceedings of IEEE Region 10 Symposium (TENSYP 2024)*, 2024.
- [C7] T Mita Kumari, Dinesh Kumar Dash, and **Abhimanyu Sahu**. “An Efficient Video Summarization Technique Using Texture Feature and Spectral Clustering”. *21st OITS International Conference on Information Technology (OCIT 2023)*, NIT Raipur, 2023.

- [C6] M. K. Nayak, D. K. Dash, P. K. Swain, and **Abhimanyu Sahu**. “Video Encryption Using Optimization Lightweight Algorithm for Secure Internet of Things”. **International Conference on Data Analytics and Insights**, pp. 331–341, May 2023.
- [C5] Arindam Sikdar, **Abhimanyu Sahu**, D. Sen, R. Mahajan, and Ananda S. Chowdhury. “Unconstrained Vision Guided UAV Based Safe Helicopter Landing”. **25th International Conference on Pattern Recognition (ICPR 2020)**, pp. 8328–8335, Milan, Italy, 2021, DOI: [10.1007/978-3-030-20081-7_18](https://doi.org/10.1007/978-3-030-20081-7_18).
- [C4] **Abhimanyu Sahu** and Ananda S. Chowdhury. “A Graph-Theoretic Framework for Summarizing First-Person Videos”. In: Conte D., Ramel JY., Foggia P. (eds) **Graph-Based Representations in Pattern Recognition (GbRPR 2019)**, Lecture Notes in Computer Science, Vol. 11510, pp. 183–193, Tours, France, 2019, DOI: [10.1007/978-3-030-20081-7_18](https://doi.org/10.1007/978-3-030-20081-7_18).
- [C3] **Abhimanyu Sahu**, Rajit Bhattacharya, Pallabh Bhura, and Ananda S. Chowdhury. “Action Recognition from Egocentric Videos using Random Walks”. **Third International Conference on Computer Vision & Image Processing (CVIP 2018)**, B. B. Chaudhuri et al. (eds.), Springer Advances in Intelligent Systems and Computing, Vol. 1024, pp. 1–14, Jabalpur, India, 2018, DOI: [10.1007/978-981-32-9291-8_31](https://doi.org/10.1007/978-981-32-9291-8_31).
- [C2] **Abhimanyu Sahu** and Ananda S. Chowdhury. “Shot Level Egocentric Video Co summarization”. **24th International Conference on Pattern Recognition (ICPR 2018)**, Beijing, China, pp. 2887–2892, 2018, DOI: [10.1109/ICPR.2018.8546119](https://doi.org/10.1109/ICPR.2018.8546119).
- [C1] Partha Pratim Sarangi, **Abhimanyu Sahu**, and Madhumita Panda. “Training a Feed-Forward Neural Network Using Artificial Bee Colony with Back-Propagation Algorithm”. **2nd International Conference on Advanced Computing, Networking, and Informatics**, Springer India, Vol. 243, pp. 511–519, 2014, DOI: [10.1007/978-81-322-1665-0_49](https://doi.org/10.1007/978-81-322-1665-0_49).