

# Research Publications

## Journal Papers

- [1] Mayank Kumar Rusia and Dushyant Kumar Singh, "A Novel Deep Transfer Learning based Approach for Face Pose Estimation" *Cybernetics and Information Technologies*, Vol pp. (April 2024) [Accepted, **Scopus Indexed**]
- [2] Lalit Kumar, **D. K. Singh**, "Diversified realistic face image generation GAN for human subjects in multimedia content creation", *Wiley Computer Animation And Virtual Worlds*, Vol 35.2 pp. e2232 (April 2024). [**SCI Indexed, IF=1.1**]
- [3] Amit Yadav, **D. K. Singh**, "Artificial Intelligence Control Learning for Autonomous Industrial Robots", *International Journal of Computational Vision and Robotics*, Vol pp. (February 2024). [Accepted, **Scopus**]
- [4] Lalit Kumar, **D. K. Singh**, "A novel aspect of automatic Vlog Content Creation using generative Modeling approaches", *Elsevier Digital Signal Processing*, Vol 148 pp. 104462 (May 2024). [**SCI Indexed, IF=2.9**]
- [5] Lalit Kumar, **D. K. Singh**, "Pose Image Generation for Video Content Creation using Controlled Human Pose Image Generation GAN", *Springer Multimedia Tools and Applications*, Vol 83 pp. 59335-59354 (December 2023). [**SCI Indexed, IF=2.757**]
- [6] V. P. Singh, Aman Verma, **D. K. Singh**, Ritesh Maurya, "Improved content-based brain tumor retrieval for magnetic resonance images using weight initialization framework with densely connected deep neural network", *Springer Neural Computing and Applications*, Vol pp. (Nov 2023). [Preprint, **SCI Indexed, IF=6.0**]
- [7] Aquib Ansari, **D. K. Singh**, Ruchi Jayaswal "Using Postural Data and Recurrent Learning to Monitor Shoplifting Activities in Megastores", *Wiley Concurrency and Computation: Practice and Experience*, Vol 36.2 e7900 (January 2023) [**SCI Indexed, IF=2.0**]
- [8] Aquib Ansari, **D. K. Singh**, Vibhav Prakash Singh, "Detecting Abnormal Behavior in Megastore for Crime Prevention using a Deep Neural Architecture", *International Journal of Multimedia Information Retrieval*, Vol 12 art. 25 (August 2023). [**SCI Indexed, IF=2.553**]
- [9] Mayank Kumar Rusia, and **D. K. Singh**, "An Improved Deep Transfer Learning Approach to Identify the Human Face Mask in Real-Time Considering the COVID-19 Pandemic," *Springer Multimedia Tools and Applications*, Vol 83 pp. 21695-21743 (July 2023). [**SCI Indexed, IF=2.757**]
- [10] Aquib Ansari, **D. K. Singh**, Vibhav Prakash Singh, "Detecting Abnormal Behavior in Megastore for Intelligent Surveillance through 3D Deep Convolutional Model", *SCIENDO Journal of Electrical Engineering*, Vol 74.3 pp. 140-153 (March 2023) [**SCI Indexed, IF=0.840**]
- [11] Aquib Ansari, **D. K. Singh**, "Optimized parameter tuning in a recurrent learning process for shoplifting activity classification", *Cybernetics and Information Technologies*, Vol 23.1 pp. 141-160 (March 2023). [**Scopus Indexed**]

- [12] Shruti Pallawi, **D. K. Singh**, “Study of Alzheimer’s Disease Brain Impairment and methods for its early diagnosis: A Comprehensive Survey”, International Journal of Multimedia Information Retrieval, Vol 12.1 art. 7 (March 2023). [**SCI Indexed, IF=2.553**]
- [13] Neelam Dwivedi, **D. K. Singh**, D. S. Kushwaha, “A Novel Approach for Suspicious Activity Detection with Deep Learning”, Springer Multimedia Tools and Applications, Vol 82 pp. 32397-32420 (March 2023). [**SCI Indexed, IF=2.757**]
- [14] Shruti Pallawi, **D. K. Singh**, “Review and Analysis of Deep Neural Network Models for Alzheimer's Disease Classification using Brain MRI”, Cognitive Computation and Systems, Vol 5.1 pp. 1-13 (Feb 2023). [**Scopus Indexed**]
- [15] Mayank Kumar Rusia, **D. K. Singh**, “Deep Architecture Based Face Spoofing Identification in Real-Time Application”, Inderscience International Journal of Biometrics, Vol 15.2 pp. 134-152 (January 2023). [**Scopus Indexed, ESCI**]
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- [17] Lalit Kumar, **D. K. Singh**, “Hardware Response and Performance Analysis of Multicore Computing Systems for Deep Learning Algorithms”, Cybernetics and Information Technologies, Vol 22.3 pp. 68-81 (June 2022). [**Scopus Indexed**]
- [18] **D. K. Singh**, “Recognizing Elderly Peoples by Analyzing their Walking Pattern using Body Posture Skeleton”, Springer International Journal of System Assurance Engineering and Management, Vol 14 pp. 79-86 (December 2022) [**Scopus Indexed**]
- [19] Mayank Kumar Rusia, **D. K. Singh**, “A Color-Texture-based Deep Neural Network Technique to Detect Face Spoofing Attacks”, Cybernetics and Information Technologies, Vol 22.3 pp. 127-145 (September 2022). [**Scopus Indexed**]
- [20] Mayank Kumar Rusia, **D. K. Singh**, “A Comprehensive Survey on Techniques to Handle Face Identity Threats: Challenges and Opportunities”, Springer Multimedia Tools and Applications, Vol 82.2 pp. 1669–1748 (May 2022). [**SCI Indexed, IF=2.757**]
- [21] Aquib Ansari, **D. K. Singh**, “A Review of Machine Learning Approaches for Human Detection through Feature Based Classification”, International Journal of Computing and Digital Systems, Vol 12.1 pp. 569-586 (March 2022). [**Scopus Indexed**]
- [22] Aquib Ansari, **D. K. Singh**, “ESAR, An Expert Shoplifting Activity Recognition System”, Cybernetics and Information Technologies, Vol 22.1 pp. 190-200 (March 2022). [**Scopus Indexed**]
- [23] Neelam Dwivedi, **D. K. Singh**, D. S. Kushwaha, “Employing Data Generation for Visual Weapon Identification using Convolutional Neural Networks”, Springer Multimedia Systems, Vol 28.1 pp. 347-360 (October 2021) [**SCI Indexed, IF = 1.935**]
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- [28] Aquib Ansari, **D. K. Singh**, “Significance of Color Spaces & their Selection for Image Processing: A Survey”, Recent Advances in Computer Science and Communications, Benthamscience, Vol 15.7 pp. 946-956 (July 2022). [Accepted, Scopus Indexed]
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- [30] Neelam Dwivedi, **D. K. Singh**, D. S. Kushwaha, “An Approach for Unattended Object Detection through Contour Formation using Background Subtraction”, Elsevier Procedia Computer Science, Vol 171C pp. 1979-1988 (Jan 2020) [Scopus]
- [31] Komal Bajaj, **D. K. Singh**, Aquib Ansari, “Autoencoders Based Deep Learner for Image Denoising”, Elsevier Procedia Computer Science, Vol 171C pp. 1535-1541 (Jan 2020) [Scopus]
- [32] **D. K. Singh**, Sumit Paroothi, Mayank Kumar Rusia, Aquib Ansari, “Human Crowd Detection for City Wide Surveillance”, Elsevier Procedia Computer Science, Vol 171C pp. 350-359 (Jan 2020) [Scopus]
- [33] Neelam Dwivedi, **D. K. Singh**, D. S. Kushwaha, “Orientation Invariant Skeleton Feature (OISF): A new feature for Human Activity Recognition”, Springer Multimedia Tools and Applications, Vol 79 pp. 21037-21072 (April 2020). [SCI Indexed, IF=2.757]
- [34] **D. K. Singh**, D. S. Kushwaha, “Automatic Intruder Combat System: A way to Smart Surveillance”, Defense Science Journal Vol 67.1 pp. 50-58 (January 2017). [SCI Indexed, IF=0.730] DOI : 10.14429/dsj.67.10286
- [35] Pushkar P. Goswami, Diwakar Paswan, **D. K. Singh**, “Detecting moving objects in traffic surveillance video”, International Journal of Control Theory and Applications, Vol 9.17, pp 8423-8430 (2016) [Scopus]
- [36] **D. K. Singh**, D. S. Kushwaha, “Analysis of face feature based human detection techniques”, International Journal of Control Theory and Applications, Vol 9.22, pp 173-180 (2016) [Scopus]

- [37] Pushkar Protik Goswami, **D. K. Singh**, “A hybrid approach for real-time object detection and tracking to cover background turbulence problem”, Indian Journal of Science and Technology, Vol 9.45 (2016) [**Scopus**]
- [38] **D. K. Singh**, D. S. Kushwaha, “ILUT based Skin Colour Modelling for Human Detection”, Indian Journal of Science and Technology, Vol 9.32 (2016) [**Scopus**]
- [39] **D. K. Singh**, “Dynamic Environment Exploration Tool: A Blind’s Eye”, IJCSIT, Vol 6(3) pp. 2819-2822 (2015)
- [40] Avinash, Nayaneesh, **D. K. Singh**, D S Kushwaha, “Test case Reduction through Prioritization Technique”, International Journal of Mathematical & Computational Sciences, Vol 1, Issue 1(2014), pp 12-16

### **Conference Proceedings**

- [1] Lalit Kumar, **D. K. Singh**, “Efficient 3D Object Synthesis and Modeling through Generative Adversarial Networks”, 16<sup>th</sup> KST - 2024, Burapha University, Krabi (Thailand), Feb 28 – March 02, 2024. [IEEE, **Scopus**]
- [2] Mayank Kumar Rusia and **D. K. Singh**, “Analyzing Some Efficient Deep Learners for Face Pose Estimation”, IEEE R10HTC-2023, Marwadi University Rajkot (India), 16-18 October 2023. [IEEE, **Scopus**]
- [3] Shivam Kashyap, Akash Gupta, Aquib Ansari, **D. K. Singh**, “Review of an Evolved DNN Architecture EfficientNet for Yoga Pose Detection Problem”, IEEE R10HTC-2023, Marwadi University Rajkot (India), 16-18 October 2023. [IEEE, **Scopus**]
- [4] Shruti Pallawi, **D. K. Singh**, “Detection of Alzheimer's Disease stages using Pre-trained Deep Learning approaches”, 5th IEEE International Conference on Cybernetics, Cognition and Machine Learning Applications (ICCCMLA), Germany, 7-8 October 2023. [IEEE, **Scopus**]
- [5] Lalit Kumar, **D. K. Singh**, “Performance Evaluation of Video-to-Video Synthesis GAN models on Cityscapes Dataset”, 14<sup>th</sup> ICCCNT - 2023, IIT Delhi, (India), 6-8 July 2023. [IEEE, **Scopus**]
- [6] Rakesh Kumar Rai, **D. K. Singh**, “Cognitive State Classification Using a Single-channel Headset: An EEG Analysis Approach”, 14<sup>th</sup> ICCCNT - 2023, IIT Delhi, (India), 6-8 July 2023. [IEEE, **Scopus**]
- [7] Lalit Kumar, **D. K. Singh**, “Comparative analysis of Vid2Vid and Fast Vid2Vid Models for Video-to-Video Synthesis on Cityscapes Dataset”, IC2E3 - 2023, NIT Uttarakhand, Srinagar Garhwal, Uttarakhand (India), 8-9 June 2023. [IEEE, **Scopus**]
- [8] Rakesh Kumar Rai, **D. K. Singh**, “EEG-Based Binary Classification of Brain State of Activities Level Using a Single-Sensor Headset”, 2<sup>nd</sup> International Conference

- ‘Women Researchers in Electronics and Computing - 2023’, NIT Jalandhar, Punjab (India), 21-23 April 2023. [Springer, **Scopus**]
- [9] Aquib Ansari, **D. K. Singh**, “Deep-3DConvNet: A network to detect Abnormal Activities at Megastores”, IBSSC-2022, IEEE section Mumbai, NIMS, Mumbai (India), 08-10 Dec 2022. [IEEE, **Scopus**]
- [10] **D. K. Singh**, Aquib Ansari, Shruti Pallawi “Computer Vision based Visual Activity Classification through Deep Learning Approaches”, Tensymp-2022, IEEE Bombay Section, IIT Bombay, Mumbai (India), 01-03 July 2022. [IEEE, **Scopus**]
- [11] Lalit Kumar, **D. K. Singh**, “Analyzing Computational Response and Performance of Deep Convolution Neural Network for Plant Disease Classification using Plant Leave Dataset”, 10<sup>th</sup> IEEE CSNT-2021, OIST Bhopal (India), 18-19 June 2021. [IEEE, **Scopus**]
- [12] **D. K. Singh**, “3D-CNN based Dynamic Gesture Recognition for Indian Sign Language Modeling”, ACLing-2021, The British University in Dubai, Dubai (UAE), 04-05 June 2021. [Elsevier, **Scopus**]
- [13] Aquib Ansari, **D. K. Singh**, “An Expert Eye for Identifying Shoplifters in Mega Stores”, 4<sup>th</sup> ICICC-2021, University Of Delhi, New Delhi (India), 20-21 Feb 2021. [Springer AISC, **Scopus**]
- [14] **D. K. Singh**, Anshu Kumar, Aquib Ansari, “Robust Modelling of Static Hand Gestures using Deep Convolutional Network for Sign Language Translation”, ICCIS-2021, Sharda University, Greater Noida (India), 19-20 Feb 2021. [IEEE, **Scopus**]
- [15] **D. K. Singh**, Sumit Paroothi, Mayank Kumar Rusia, Aquib Ansari, “Human Crowd Detection for City Wide Surveillance”, 3<sup>rd</sup> CoCoNet-2019, IIIT Kerala, Trivandrum (India), 18-21 Dec 2019 [Elsevier, **Scopus**]
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- [20] Mayank Kumar Rusia, **D. K. Singh**, Mohd. Aquib Ansari, “Human Face Identification using LBP and Haar-like features for Real-time Attendance Monitoring”, ICIIP-2019, JUIT Solan, H.P. (India), 15-17 Nov 2019 [IEEE, **Scopus**]

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- [22] Janpreet Singh, Harjeet Singh, **D. K. Singh**, “A Novel Approach based on Gesture Recognition through Video Capturing for Sign Language”, 2<sup>nd</sup> ICICICT – 2019, VJEC Kannur, Kerala (India), 5-6 July 2019 [**IEEE, Scopus**]
- [23] Singh Rupal H., S. R. Mohanty, Nand Kishor, **D. K. Singh**, “Comparison of Empirical Mode Decomposition and Wavelet Transform for Power Quality Assessment in FPGA”, PEDES-2018, IIT Madras, Chennai (India), 18-21 Dec 2018 [**IEEE, Scopus**]
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- [25] Mohd Ali Ansari, **D. K. Singh**, “Review of Deep Learning Techniques for Object Detection and Classification”, CNC-2018, ITM University, Gwalior (India), 22-24 March 2018 [**Springer, Scopus**]
- [26] Neelam Dwivedi, **D. K. Singh**, “Review of Deep Learning Techniques for Gender Classification in images”, ICHSA-2018, BML Munjal University, Gurgaon (India), 07-09 Feb 2018 [**Springer, Scopus**]
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- [29] Sonu Sharma, Radhika Agrawal, Snehil Srivastava, **D. K. Singh**, “Review of Human Detection Techniques in Night Vision”, WiSPNET 2017, SSN College of Engineering, Chennai (INDIA), 22-24 March 2017 [**IEEE, Scopus**]
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- [43] **D. K. Singh**, “Early Prediction of Performance of Software Systems”, 6<sup>th</sup> ADTECH-ITEM, GLAITM, Mathura, Feb 2010.
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### **Book Chapters**

- [1] Lalit Kumar, **D. K. Singh**, Aquib Ansari “Role of Video Content Generation in Education Systems Using Generative AI.” Integrating Generative AI in Education to Achieve Sustainable Development Goals, edited by Ruchi Doshi et. al., IGI Global, 2024, pp. 354-368.
- [2] Aquib Ansari, **D. K. Singh**, “An Expert Eye for Identifying Shoplifters in Mega Stores”, Springer AISC Series, vol 1394, pp 107-115, 2021. [**SCOPUS, ISI Proceedings**]
- [3] **D. K. Singh**, “Human Action Recognition in Video”, Advance Informatics for Computing Research, Springer Nature Singapore, Vol 955, pp 54-66, 2018 [**SCOPUS, ISI Proceedings**]

- [4] Mohd Ali Ansari, **D. K. Singh**, “Review of Deep Learning Techniques for Object Detection and Classification”, Springer CCIS series, Vol 839, pp 422-431, 2018 [SCOPUS, ISI Proceedings]
- [5] Neelam Dwivedi, **D. K. Singh**, “Review of Deep Learning Techniques for Gender Classification in images”, Springer AISC series, Vol 741, pp 1089-1099, 2018 [SCOPUS, ISI Proceedings] DOI: 10.1007/978-981-13-0761-4\_102
- [6] **D. K. Singh**, D. S. Kushwaha, “Tracking movements of Human Being in a Real-Time Surveillance Scene”, Springer AISC series, Vol 437, pp 491-500, 2015 [SCOPUS, ISI Proceedings]
- [7] Tulika Mithal, Kshitij Shah, **D. K. Singh**, “Case Studies on Intelligent approaches for Static Malware Analysis”, Springer Singapore, ERCICA-2015 Vol 3, pp 555-567, 2015. [SCOPUS, ISI Proceedings]

### **Magazines**

- [1] **D. K. Singh**, An article titled “Understanding Machine Vision by Human Activity Recognition” in January 2018 issue of CSI Communications, Vol 41.10, Pg 31-32
- [2] **D. K. Singh**, An article titled “Medical Imaging & Processing” in September 2016 issue of CSI Communications, Vol 40.6, Pg 10-12
- [3] **D. K. Singh**, An article titled “Object Detection: A key component in Image & Video Processing” in September 2015 issue of CSI Communications, Vol 39.6, Pg 9-10

Total Paper published in SCI/SCIE Journal: 17

Total Paper published in Scopus indexed Journal: 21

Total Paper Published in Conference: 44

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