Faculty Profile

1. Name: Dr. Shashidhar R
2. Designation: Associate Professor
3. Qualification: B.E., M.Tech., Ph.D.
4. Email/LinkedIn/ORCID: shashidhar.r@jssstuniv.in/ https://www.linkedin.com/in/shashidhar-r-ph-d-ab6152123/ 0000-0002-3737-7819
5. Work Experience: 13 Years
6. Specialization: Biomedical Signal/ Image Processing, Machine Learning, Deep Learning, Quantum Machine Learning
7. Subjects Taught: Signals and Systems, Digital Signal Processing, Advanced DSP, Machine Learning, Artificial Intelligence and Deep Learning, VLSI and Embedded Systems, wireless communication, AI in Automotive electronics
8. Research Guidance: 04
9. Publications: 85

INTERNATIONAL JOURNALS

[1]. R., Shashidhar, R., Deekshith, Govardhan, Lalithya, K., Rujwal, P. S., Gagan Deep, S. B., Kshama, Autonomous Robot for Crop Disease Detection, Diagnosis, and AI-Driven Smart Farming Solutions, Advances in Agriculture, 2026, 1615823, 25 pages, 2026. https://doi.org/10.1155/aia/1615823

[2]. M. V. Chandrashekhar, N. Pradeep, V. Kantharaju, M. V. Ramya, D. K. S., and R. Shashidhar, "Explainable Cross-Modal Attention Fusion of ViT and BiLSTM for Automated Sleep Apnea Severity Assessment from EEG Signals", Eng. Technol. Appl. Sci. Res., vol. 16, no. 5, pp. 39689–39695, Oct. 2026.

[3]. Priyanka R, Ramya M V, Roopa M, Shashidhar R, "Edge–Cloud Intelligence in Disaster Management: A Review of Architectures, Challenges, and Opportunities," International Journal of Electronics and Communication Engineering, vol. 13, no. 7, pp. 347-368, 2026. Crossref, https://doi.org/10.14445/23488549/IJECE-V13I7P125

[4]. Shashidhar R and Vishnu R Navali and Pranjali Gajbhiye and Saranyaraj D (2026) "Hybrid vision transformer–BiLSTM for EEG-based sleep apnea severity classification",6,100137,Sleep Epidemiology, https://doi.org/10.1016/j.sleepe.2026.100137

[5]. R Shashidhar, Vishnu R Navali, Pranjali Gajbhiye, D Saranyaraj(2026) "Hybrid Vision Transformer–BiLSTM for EEG-Based Sleep Apnea Severity Classification" 6, 100137, Sleep Epidemiology, https://doi.org/10.1016/j.sleepe.2026.100137

[6]. Saranyaraj, D., Govardanan, N., Kumar, S.N. Karthickeien Elangovan & R. Shashidhar "Water hyacinth detection for autonomous navigation mapping using image segmentation cascaded classifier". Scientific Reports 16, 4051 (2026). https://doi.org/10.1038/s41598-025-34128-7

[7]. Shashidhar, R., Nayaka, N.G., Chethan, S. et al. "Deep learning approaches for automated bird sound classification using MFCC features". Int. j. inf. tecnol. (2025). https://doi.org/10.1007/s41870-025-02981-4

[8]. Shashidhar R, Suraj V, Vinayakumar Ravi, Varadaraj G, Akshay Kumar "AHCL: AI-based real-time hidden video stream identification platform", Journal of Asian Scientific Research, Vol. 15, No. 4, 796-814, DOI: 10.55493/5003.v15i4.5751

[9]. Bharath, H.C., Pradeep, N., Shashidhar, R. et al. "Synergistic medical genetic evolutionary optimization and deep convolutional generative augmentation with SHAP-driven interpretability for precise Alzheimer's disease severity grading". Brain Inf. 12, 31 (2025). https://doi.org/10.1186/s40708-025-00280-z

[10]. Hemashree H C, Pradeep N, Ahmed Mujib B. R, Shashidhar R, Vinayakumar Ravi "Hyperparameter optimized deep learning models for multiclass oral lesion classification in proprietary histopathological image Data", Volume 13, pp 100437, Franklin open, https://doi.org/10.1016/j.fraope.2025.100437.

[11]. Amit, S., Shashidhar, R., Talasila, V. et al. "AI modelling-based reconfigurable dual band antenna for GPS and ISM bands with metamaterial superstrate for high gain application". Discov Appl Sci 7, 1345 (2025). https://doi.org/10.1007/s42452-025-07892-4

[12]. H. C. Bharath, N. Pradeep, R. Shashidhar, P. Nooji, and J. Meghana, "An Explainable Deep Learning Model for Classification and Analysis of Alzheimer's Disease for Clinical Trust", Eng. Technol. Appl. Sci. Res., vol. 15, no. 6, pp. 28762–28768, Dec. 2025.

[13]. Shashidhar R et al. (2025) "Advancing Colonoscopy Diagnosis for Polyp Recognition using FASTAI and Efficient Net Deep Learning", The Open Bioinformatics Journal(Accepted)

[14]. R. Shashidhar, M. P. Shashank, Vinayakumr Ravi, Alanoud Al Mazroa(2025) "Audio and Visual Speech for the Biometric Security System" Security and Privacy, https://doi.org/10.1002/spy2.70056

[15]. Vinodhini V, Sathiyabhama B, Vidhushavarshini S, Ravi V, Shashidhar R. (2025) "Ensemble-based Heart Disease Diagnosis (EHDD) Using Feature Selection and PCA Extraction Methods" Open Bioinform J, 2025; 18: e18750362349305. http://dx.doi.org/10.2174/0118750362349305250131062510

[16]. Tapkire, M., Arun, V., Lavanya, M.S., Shashidhar R. "Gluten identification from food images using advanced deep learning and transfer learning methods". J Food Sci Technol (2024). https://doi.org/10.1007/s13197-024-06158-y

[17]. Jagadamba G, Shashidhar R, Vinayakumar Ravi, Sahana Mallu, and Tahani Jaser Alahmadi "Design of Interoperable Electronic Health Record (EHR) Application for Early Detection of Lung Diseases Using a Decision Support System by Expanding Deep Learning Techniques" The Open Respiratory Medicine Journal, 18, e18743064296470, DOI: 10.2174/0118743064296470240520075316, 2024

[18]. R. Shashidhar, S. Patilkulkarni, Vinayakumar Ravi, H.L. Gururaj, Moez Krichen (2024) "Audiovisual speech recognition based on a deep convolutional neural network " Data Science and Management Doi: https://doi.org/10.1016/j.dsm.2023.10.002

[19]. Shashidhar R, Shashank M P, Sahana B (2023) "Enhancing Visual Speech Recognition for Deaf Individuals: A Hybrid LSTM and CNN 3D Model for Improved Accuracy" Arabian Journal for Science and Engineering, Doi:10.1007/s13369-023-08385-5(SCI, Q1, Impact Factor-2.9)

[20]. Jagadamba G, Shashidhar R, Gururaj H L, Vinayakumar Ravi4, Meshari Almeshari and Yasser Alzamil(2023) "Electronic Health Record (EHR) System Development for Study on EHR Data based Early Prediction of Diabetes Using Machine Learning Algorithms" The Open Bioinformatics Journal, pp 1-18, http://dx.doi.org/10.2174/18750362-v16-e230906-2023-15 (Scopus)

[21]. Pitchaimani, J., Rakesh B S, Bharathi M.B, Sudarshan Patil Kulkarni, Shashidhar R, Sumukh K A, Moudgalya, Mahendra H N and Prajwal H S(2023) "New Age Hearing Testing at your Fingertips: Shravana Mitra App". Indian Journal of Otolaryngology and Head Neck Surgery.

https://doi.org/10.1007/s12070-023-04157-7
(ESCI, Scopus, Impact Factor- 0.5)

[22]. Swetha Amit, Viswanath Talasila, Ramya T R, Shashidhar R (2023) “Frequency Selective Surface Textile Antenna for Wearable Applications” Wireless Personal Communications https://doi.org/10.1007/s11277-023-10644-5
(SCI, Impact Factor – 2.2, Q2)

[23]. Shashidhar, R., Manjunath, D. & Shanmukha, S.M. (2023) "CrackSpot: deep learning for automated detection of structural cracks in concrete infrastructure" Asian Journal of Civil Engineering. https://doi.org/10.1007/s42107-023-00754-7 (Scopus, Q3)

[24]. Shashidhar Rudregowda; Sudarshan Patil Kulkarni, H L, Gururaj.; Vinayakumar Ravi.; Moez Krichen (2023) "Visual Speech Recognition for Kannada Language Using VGG16 Convolutional Neural Network". Acoustics, 5, 343–353. https://doi.org/10.3390/ acoustics5010020 (ESCI, Scopus, Impact Factor-2.1)

[25]. Shashidhar R et al. (2022) “Computer vision and the IoT-Based Intelligent Road Lane Detection System” Mathematical Problems in Engineering, Article ID4755113, 8 pages, 2022. https://doi.org/10.1155/2022/4755113 (SCI,Q2,Impact Factor 1.4)

[26]. Shashidhar R and Sudarshan Patilkulkarni (2022)"Audiovisual speech recognition for Kannada language using feed forward neural network" Neural Computing and Applications,34,15603-15615, https://doi.org/10.1007/s00521-022-07249-7 (SCI, Q1, Impact Factor-5.6)

[27]. Shashidhar R et al. (2022) "Indian Sign Language Recognition Using 2-D Convolution Neural Network and Graphical User Interface" International Journal of Image, Graphics and Signal Processing(IJIGSP), Vol . 14, No.2, pp. 61-73, 2022.DOI: 10.5815/ijigsp.2022.02.06 (Scopus)

[28]. Shashidhar, R., Patilkulkarni, S. & Puneeth, S.B. (2022)"Combining audio and visual speech recognition using LSTM and deep convolutional neural network" International Journal of Information Technology. https://doi.org/10.1007/s41870-022-00907-y (Scopus)

[29]. Shashidhar R et al. (2021) “An Automated Prediction Model for College Admission System” Elementary Education Online Vol 20 (Issue 6): pp. 1172- 1180, 2021. doi: 10.17051/ilkonline 2021.06.124(Scopus Indexed)

[30]. Shashidhar R, Sahana V, Chakraborty S, Puneeth SB, Roopa M. (2021) “Recognition of Tablet using Blister Strip for Visually Impaired using SIFT Algorithm”. Indian Journal of Science and Technology. 14(23): 1953-1960. https://doi.org/10.17485/IJST/v14i23.750 (Wos)

[31]. Shashidhar R and Sudarshan Patilkulkarni (2021) "Visual speech recognition for small-scale dataset using VGG16 convolution neural network”. Multimedia Tools and Applications. https://doi.org/10.1007/s11042-021-11119-0"(SCI, Scopus, Q1, Impact Factor-3.6,)

[32]. Nikhil S. Mangrulkar, Kavita R. Singh, Mukesh Raghuwanshi and Shashidhar R. (2020)“Parsing Expression Grammar and Packrat Parsing -A Review” Journal of University of Shanghai for Science and Technology, Volume 22, Issue 12, December 2020, PP-895-901 D.O.I-10.51201/12368(Scopus)

[33]. Shashidhar, R., Shruthi, B. R., Hariprasad, S. A., and Singh, K. R. (2020). “Real-Time Fatigue Detection using a Low-Cost Wireless EEG Device”. I-manager’s Journal on Embedded Systems, 8(2), 8-13. https://doi.org/10.26634/jes.8.2.17197

[34]. Sooraj V, Hardhik M, Nishanth S Murthy, Sandesh C, Shashidhar R (2020) “Lip-Reading Techniques: A Review” International Journal of Scientific & Technology Research Volume 9, Issue 02, February 2020 (Scopus)

[35]. Shashidhar R, Abhilash S, Sahana V, Aloka N A, Roopa M (2020) “IOT Cloud: In Health Monitoring System" International Journal of Scientific and Technology Research, Volume 9, Issue 1, January 2020 (Scopus)

[36]. Prajwal M J., Tejas K B., Varshad V., Mahesh Madivalappa Murgod and Shashidhar R (2019) “Detection of Non-Helmet Riders and Extraction of License Plate Number using Yolo v2 and OCR Method” International Journal of Innovative Technology and Exploring Engineering (IJITEE) Volume 9, Issue 2, pp 5167-5172,2019 DOI: DOI: 10.35940/ijitee. B6527.129219

[37]. Prajwal M J., Tejas K B., Varshad V., Mahesh Madivalappa Murgod and Shashidhar R (2019) “A Review on Helmet Detection by using Image Processing and Convolutional Neural Networks” International Journal of Computer Applications 182(50):52-55, April 2019 DOI: 10.5120/ijca2019918770

[38]. Nayana R, Shashidhar R (2019) “Smart Door Lock System” International Journal for Modern Trends in Science and Technology (IJMTST), Volume 5, Issue 2, February 2019, PP-36-38.

[39]. Shreekanth T, Shashidhar R and Basavaraju N M,(2017) "Performance Evaluation of Edge detection techniques in Spatial and Frequency domain", International Journal of Multimedia and Image Processing(IJMIP), Volume 7, Issue 1, March 2017.

INTERNATIONAL CONFERENCE

[1]. P. G, M. N, S. A. Bhyratae, S. R, Shreekshitha and V. V. V, "Real-Time Hand Gesture Communication for the Hearing and Speech Impaired Using YOLO with FRNN Algorithm," 2026 International Conference on Natural Language Processing and Computer Vision (ICNPCV), BANGALORE, India, 2026, pp. 1-6, doi: 10.1109/ICNPCV69434.2026.11708827.

[2]. S. R, D. R, T. S. Tagare, R. M. V, M. Narayana and R. M, "Automated Seismic Signal Classification Using EMD-Based Denoising and LSTM Networks for Earthquake Detection," 2026 International Conference on Natural Language Processing and Computer Vision (ICNPCV), BANGALORE, India, 2026, pp. 1-6, doi: 10.1109/ICNPCV69434.2026.11708902.

[3]. S. R, R. M V, K. M A, S. K. R, M. R and R. M, "Speech-Based Emotion Recognition Using MFCC Features and XGBoost-BiLSTM Models on the SAVEE Dataset," 2026 International Conference on Emerging Research in Smart Electronics and Machine Informatics (ECMI), Chikkamagaluru, India, 2026, pp. 1-9, doi: 10.1109/ECMI68341.2026.11602711.

[4]. S. M P, S. R and J. C. Shanbal, "Explainable Machine Learning for Autism Spectrum Disorder Detection Using P300 EEG Signals," 2026 International Conference on Emerging Research in Smart Electronics and Machine Informatics (ECMI), Chikkamagaluru, India, 2026, pp. 1-10, doi: 10.1109/ECMI68341.2026.11603046.

[5]. T. M. A, A. C V, S. P. Kulkarni, J. Venkatesan, Shankaraiah and S. R, "Communication Link Design and Budget Analysis for JSS Nanosatellite Project," 2025 IEEE Space, Aerospace and Defence Conference (SPACE), Bangalore, India, 2025, pp. 1-6, doi: 10.1109/SPACE65882.2025.11171067.

[6]. P. Nashipudi, S. R, M. R and A. Araballi, "Timing-Aware Design and Verification of a 1×4 Packet Switching Router," 2025 5th Asian Conference on Innovation in Technology (ASIANCON), PIMPRI, India, 2025, pp. 1-8, doi: 10.1109/ASIANCON66527.2025.11280750.

[7]. A. P. S, A. T, M. J, S. R, D. k. S and M. A. S, "Context-Aware Colorization of Grayscale Images Using Deep Neural Networks," 2025 2nd International Conference on Intelligent Algorithms for Computational Intelligence Systems (IACIS), Hassan, India, 2025, pp. 1-7, doi: 10.1109/IACIS65746.2025.11211471.

[8]. S. D. Naik, S. L. Bijapur, M. R, S. K. Gowda, R. K and S. R, "Implementation of the Handshaking Mechanism in AXI Protocol in a Lower Technology Node," 2025 5th Asian Conference on Innovation in Technology (ASIANCON), PIMPRI, India, 2025, pp. 1-5, doi: 10.1109/ASIANCON66527.2025.11280746.

[9]. Shashidhar R, Shashank M P, M. R, P. Srivastava, C. Prabha and N. Roy, "Speech Emotion Recognition Based on Speaker and Gender Dependences in Cross-Linguistic," 2025 Seventh International Conference on Computational Intelligence andCommunication Technologies (CCICT), Sonepat, India, 2025, pp. 532-537, doi: 10.1109/CCICT65753.2025.00086

[10]. V. N, M. A. S, S. R, R. P, M. J and R. M, "Supervised Machine Learning Algorithm using Sleep Cycle Classification," 2025 International Conference on Intelligent Computing and Knowledge Extraction (ICICKE), Bengaluru, India, 2025, pp. 1-6, doi: 10.1109/ICICKE65317.2025.11136792.

[11]. S. R, P. Vasishta G, A. Hegde, M. J, R. M and M. D Tapkire, "Early Detection of Heart Blockages: The Power of AI and Feedforward Neural Networks," 2025 International Conference on Electronics, Computing, Communication and Control Technology (ICECCC), Bengaluru, India, 2025, pp. 1-6, doi: 10.1109/ICECCC65144.2025.11064297.

[12]. S. R, S. M P, M. R, P. Srivastava, C. Prabha and N. Roy, "Speech Emotion Recognition Based on Speaker and Gender Dependences in Cross-Linguistic," 2025 Seventh International Conference on Computational Intelligence andCommunication Technologies (CCICT), Sonepat, India, 2025, pp. 532-537, doi: 10.1109/CCICT65753.2025.00086.

[13]. Shashidhar R "Indian Sign Language Recognition Using LSTM model to Enhance Communication for Hearing Impaired people" in 2025 International Conference on Advancement in Communication & Computing in Technology (INOACC), jointly organized by Sai Vidya Institute of Technology, Bengaluru, India, held during 4th- 6th April, 2025."

[14]. R. Shashidhar, R. Manasa, K. M. Megha, P. Priyanga, A. S. Manjunath and M. Roopa, "Advancing Medical Imaging: A Focus on Efficient Net for Brain Tumor Classification," *2024 Second International Conference on Networks, Multimedia and Information Technology (NMITCON)*, Bengaluru, India, 2024, pp. 1-5, doi: 10.1109/NMITCON62075.2024.10698924.

[15]. K. Nayak, S. Route, M. Sundararajan, A. Jain, and Shashidhar R, "Sustainable Continuous Testing in DevOps Pipeline," 2*024 1st International Conference on Communications and Computer Science (InCCCS)*, Bangalore, India, 2024, pp. 1-6, doi: 10.1109/InCCCS60947.2024.10593566

[16]. Madhura R, Krutthika Hirebasur Krishnappa, Shashidhar R, Shwetha G, Yashaswini K P, Sandya G R "UVM methodology for ARINC 429 transceiver in loop back mode" 2023 3rd International Conference on Mobile Networks and Wireless Communications (ICMNWC), Tumkur, India, 2023, pp. 1-7, doi: 10.1109/ICMNWC60182.2023.10435932.

[17]. Rakesh M D, Shashidhar R, Krutthika Hirebasur Krishnappa, Madhura R. "Enhancing

Classification Accuracy and Speed with ML-DSP: A Game-Changer in Genomic Sequence Analysis," 2023 IEEE 3rd Mysore Sub Section International Conference (MysuruCon), HASSAN, India, 2023, pp. 1-6, doi: 10.1109/MysuruCon59703.2023.10396995.

[18]. Shashidhar R, Pramod Kadakol, Sreenikrth D, Preetham Patil, Krutthika Hirebasur Krishnappa, Madhura R "EEG Data Analysis for stress detection using K-nearest Neighbor" 2023 International Conference on Integrated Intelligence and Communication Systems (ICIICS), Kalaburagi, India, 2023, pp. 1-7, doi: 10.1109/ICIICS59993.2023.10420898.

[19]. Shashidhar R, Dhanush Balivada.Shalini D N, Krutthika Hirebasur Krishnappa, Roopa M "Music Emotion Recognition using Convolutional Neural Networks for Regional Languages," 2023 International Conference on Ambient Intelligence, Knowledge Informatics and Industrial Electronics (AIKIIE), Ballari, India, 2023, pp. 1-7, doi: 10.1109/AIKIIE60097.2023.10390450

[20]. Krutthika Hirebasur Krishnappa, Shashidhar R. "Detecting Parkinson's Disease with Prediction: A Novel SVM Approach" 2023 International Conference on Ambient Intelligence, Knowledge Informatics and Industrial Electronics (AIKIIE) held at Rao Bahadur Y. Mahabaleswarappa Engineering college, Ballari, Karnataka, India on November 1st -2nd 2023.

[21]. Shashidhar R, Aditya V, Srihari, Subhash M H, Krutthika Hirebasur Krishnappa "Empowering Investors: Insights from Sentiment Analysis, FFT, and Regression in Indian Stock Markets " 2023 International Conference on Ambient Intelligence, Knowledge Informatics and Industrial Electronics (AIKIIE) held at Rao Bahadur Y. Mahabaleswarappa Engineering college, Balla.Ri, Karnataka, India on November 1st -2nd, 2023.

[22]. Shashidhar R, Aprameya C V, Raghav R Bharadwaj, Sumit M Gontamar, Krutthika Hirebasur Krishnappa "Seismic Signal Processing and Aftershock Analysis using Machine Learning" IEEE International Conference on Recent Advances in Science & Engineering Technology (ICRASET-2023) held on BGS Institute of Technology, B G Nagara on 23-24 November 2023.

[23]. Shashidhar R, Aishwarya D S, Shruthi B M, Shashank M P, Neha Sharma, Pardeep Singh "Enhancing Singing Performances: Novel Method for Automatic Vocal Pitch Correction" 2023 4th International Conference on Smart Electronics and Communication (ICOSEC), Trichy, India, 2023, pp. 1095-1102, doi: 10.1109/ICOSEC58147.2023.10276251.

[24]. Shashidhar R, Shruthi B M, A S Manjunath, Roopa M, Neha Sharma, Pardeep Singh "Emotion Detection in Speech: A CNN Neural Network Approach," 2023 International Conference on Network, Multimedia and Information Technology (NMITCON), Bengaluru, India, 2023, on 1st -2nd September, pp. 1-7, doi: 10.1109/NMITCON58196.2023.10275909.

[25]. Arunakumari B. N, Shashidhar R, Shanana B, Jagadmba G, A. S. Manjunath and Roopa M, "Fingerprint definition for song recognition using Machine Learning Algorithm," 2023 International Conference on Smart Systems for applications in Electrical Sciences (ICSSES), Tumakuru, India, 2023, pp. 1-6, doi: 10.1109/ICSSES58299.2023.10199332.

[26]. Shashidhar R, Sanjay S Tippanavar, Sushma B S, P Shukla "Smart Electric Wheelchair for disabled and paralyzed person using Attention Values on Arduino," 2023 International Conference on Recent Trends in Electronics and Communication (ICRTEC), Mysore, India, 2023, pp. 1-5, doi: 10.1109/ICRTEC56977.2023.10111911.

[27]. Chandan G R and Shashidhar R **"Intelligent Robotic Arm for Industry Applications"** Fourth International Conference on "Emerging Research in Electronics, Computer Science and Technology" ICERECT – 2022, Financially sponsored by AICTE, **New Delhi** and Technical **Co-** sponsored by IEEE

Bangalore Section during 26-27, December 2022 at P. E. S. College of Engineering, Mandya 571 401, Karnataka, India.

[28]. Shashidhar R, Sanjay S Tippannavar, Krishnakumar Balachandra Bhat, Neha Sharma, Mamoon Rashid, and Arti Rana **"EEG-based Brain Wave Recognition using GRU and LSTM "** 5th International Conference on Contemporary Computing and Informatics (IC3I-2022) held on 14th - 16th December 2022 at Amity University, Greater Noida.

[29]. Sanjay S Tippannavar, Shashidhar R, Sourab Jain, R Harshith, Sweekar S C. **"ECG based Heart Disease Classification and Validation using 2D CNN",** 5th International Conference on Contemporary Computing and Informatics (IC3I-2022) held on 14th - 16th December 2022 at Amity University, Greater Noida.

[30]. Shashidhar R, Sanjay S Tippannavar, Sathvik H R, Varun S, Punith G V, Niskehp H G. **"Text Independent Speaker Recognition and Classification using KNN Algorithm",** 5th International Conference on Contemporary Computing and Informatics (IC3I-2022) held on 14th - 16th December 2022 at Amity University, Greater Noida.

[31]. Prajwal H M, Shankaraiah, Shashidhar R **"Patient Health Information Framework Using AWS S3 Service"**2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), 2022, pp. 1-5, doi: 10.1109/MysuruCon55714.2022.9972361

[32]. Shashidhar R, Gayathri S, Shivaprasad N, Rishitha R Gowda, Mohammed Zaid Salman **"Smart Helmet - Early Calamity Prediction and Warning System for Coal Miners"** 2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), 2022, pp. 1-5, doi: 10.1109/MysuruCon55714.2022.9972684.

[33]. Shashidhar R, Sanjay S Tippannavar **"EEG based Smart Wheelchair using Raspberry Pi for Elderly and Paralyzed Patients"** 2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), 2022, pp. 1-5, doi: 10.1109/MysuruCon55714.2022.9972433.

[34]. Shankar C, Hariprasad S A, and Shashidhar R . **"Analysis of Segmentation Algorithms for lung CT Images"** 2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), 2022, pp. 1-6, doi: 10.1109/MysuruCon55714.2022.9972562.

[35]. Shashidhar R, Surendra R Hegde, Chinmaya K, Ankit Priyesh, A S Manjunath **"Indian Sign Language to Speech Conversion using Convolutional Neural Network"** 2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), 2022, pp. 1-5, doi: 10.1109/MysuruCon55714.2022.9972574.

[36]. Shashidhar R et al. "Mouse Cursor Control Using Facial Movements - An HCI Application" International Conference on Sustainable Computing and Data Communication Systems ICSCDS- 2022, Vishwakarma Institute of Technology, Pune, Maharashtra, India on April 07-09,2022.https://doi.org/10.1109/ICSCDS53736.2022.9760914

[37]. Shashidhar R et al. "Movie Recommendation and Sentiment Analysis Using Machine Learning" International Conference on Intelligent Engineering Approach ICIEA-2022, H.K.E. Society's S.L.N. College of Engineering, Raichur, Karnataka on 12th February 2022. https://doi.org/10.1016/j.gltp.2022.03.012

[38]. Shashidhar R et al. "Real-time object distance measurement using stereo vision image processing"2nd International Conference on Big Data, Machine learning and Applications (BigDML 2021) held during 19-20 December 2021organized by the Department of Computer Science and Engineering, National Institute of Technology, Silchar, India.

[39]. Shashidhar R et al. "Vehicle number plate detection and recognition using YOLO- V3 and OCR Method" IEEE International Conference on Mobile Networks and Wireless Communications (ICMNWC-2021) in association with IEEE Bangalore Section during 03-04 December 2021 at Sri Siddhartha Institute of Technology, Tumkur, Karnataka. https://doi.org/10.1109/ICMNWC52512.2021.9688407

[40]. Shashidhar R et al. "Blockchain Based Agricultural Supply Chain-A Review" ICCSA-2021 held on 16th July 2021 at AIT, Bengaluru.https://doi.org/10.1016/j.gltp.2021.08.041

[41]. Shashidhar R et al. "Novel Approach for Stegnography to Camouflage Digital Information using Least Significant Bit" 3rd International Conference on Computational Intelligence in

Pattern Recognition, CIPR 2021 held on 24th & 25th April 2021, Kolkata, India. https://doi.org/10.1007/978-981-16-2543-5_47

[42]. Nagarjuna G R, Shashidhar R "IoT Enabled smart traffic system for public and Emergency Mobility in smart city" ISMAC 2020 held on 7th -9th October 2020.https://doi.org/10.1109/I-SMAC49090.2020.9243489

[43]. Mohammed Safeel, Tejas Sukumar, Shashank K S, Arman M D, Shashidhar R, Puneeth S "Sign Language Recognition Techniques- A Review" 2020 IEEE International Conference for Innovation in Technology (INOCON), 6-8 Nov. 2020, Bangluru, 2020, pp. 1-9, doi: 10.1109/INOCON50539.2020.9298376.

[44]. Shashidhar R, S. Patilkulkarni and Puneeth S. B, "Audio Visual Speech Recognition using Feed Forward Neural Network Architecture" 2020 IEEE International Conference for Innovation in Technology (INOCON), 6-8 Nov. 2020, Bangaluru, 2020, pp. 1-5, doi: 10.1109/INOCON50539.2020.9298429.

[45]. Shashidhar R, Shruthi B R, Alok N A, Nandini D B, Hariprasad S A, Shreekanth T "Real-Time Fatigue Detection Using a Low Cost Wireless EEG Device" ICEECCOT,2018 on 14th &15th December 2018 at GSSSIETW, Mysuru.

[46]. Santhosh Kumar R, Shashidhar R, Mahalingaswamy A M, Praveen Kumar M S, Roopa M "Design of High Speed AES System for Efficient Data Encryption and Decryption System using FPGA" ICEECCOT,2018 on 14th &15th December 2018 at GSSSIETW, Mysuru.

[47]. Swasthik B, Srihari H N, Vinay Kumar M K, Shashidhar R "Smart Assist For Alzheimer's Patients and Elderly People" International Conference on Computing Vision and Bio Inspired Computing(ICCVBIC 2018) on 29-30 November 2018

[48]. Sohan N, Ruthuja S. Urs, Sai Rishab H S, Shashidhar R. "Smart Assistant Shoes for Blind" International Conference on Computing Vision and Bio Inspired Computing(ICCVBIC 2018) on 29-30 November 2018.

[49]. Shubhom V.T, Swathi S, Keerthan S, Abhiram G, Shashidhar R "Brapter: Compact Braille Transput Communicator" International Conference on Consumer Electronics Asia(ICCE-Asia)- 2017 on 5th and 7th October 2017 at Bangalore DOI: 10.1109/ICCE-ASIA.2017.8309319

[50]. Shreekanth T, Shashidhar R "An Application of Image Processing Technique for Compression of ECG Signals based on Region of Interest Strategy" ICCBIC 2017 on 21-22nd September 2017 at Coimbatore(Scopus Index, Springer - Lecture Notes in Computational Vision and Biomechanics) DOI: https://doi.org/10.1007/978-3-31971767-8_85

[51]. Mahalingaswamy A. M, Shashidhar R, Santhoshkumar R, Roopa M. "Self-Dependent Tool For Quadriplegic Patient Using Home Automation" ICSIPCA-2017 on 6th and 7th July, 2017 at JSSATE, Bangalore (Tata McGraw Hill Journal)

[52]. Shashidhar R, Santhoshkumar R, Mahalingaswamy A.M, Roopa M, "FPGA Implementation of Low Power Pipelined 32-bit RISC Processor Using Clock Gating", 2016 ICECT 1st International Conference on Data Engineering and Communication Technology, pp.79, Lavasa City, Pune-India. March 10-11,2016. (Advances in Intelligent Systems and Computing, Volume 469, page no.769-777, Springer, Singapore) DOI: https://doi.org/10.1007/978-981-10-1678-3_74 Journals

Book

1. Dhakshayani J, Shashidhar R, Vinayakumar Ravi, Roopashree S, Deepti Gupta. (Eds.). (2026). NextGen Strategies and Tools: Pioneering Innovations in Agriculture (1st ed.). CRC Press. https://doi.org/10.1201/9781003613510

Book Chapter

[1]. M P Shashank, M S Shalini, R Shashidhar, S Roopashree "A Scalable Deep Learning Framework for Cotton Crop Disease Diagnosis in Resource-Limited Environments", NextGen Strategies

and Tools, https://doi.org/10.1201/9781003613510-9

[2]. M S Rachana, Shridevi A Desai, S Roopashree, R Shashidhar "AgroBot: A Domain-Specific Agricultural Knowledge System Using Retrieval-Augmented Generation", NextGen Strategies and Tools, https://doi.org/10.1201/9781003613510-2

[3]. M P Shashank, R Shashidhar, A S Manjunath, Deepti Gupta "Vision-Based Soil Nutrient Responsive Fertiliser Dispensing Bot", NextGen Strategies and Tools,https://doi.org/10.1201/9781003613510-11.

[4]. Dhakshayani J, Shashidhar R, Vinayakumar Ravi, Roopashree S, Deepti Gupta "NextGen Strategies and Tools Pioneering Innovations in Agriculture", 1st Edition, https://doi.org/10.1201/9781003613510, eBook ISBN9781003613510

[5]. Arpitha, T., Shashidhar, R., Pruthvi, C.N., Tapkire, M., Meghana, J. (2026). A PSO-Fuzzy Approximate Reasoning Model for Decision Support in Remote Health Monitoring. In: Patel, K.K., Santosh, K., Gomes de Oliveira, G., Patel, A., Ghosh, A. (eds) Soft Computing and Its Engineering Applications. icSoftComp 2025. Communications in Computer and Information Science, vol 2873. Springer, Cham. https://doi.org/10.1007/978-3-032-22059-2_29

[6]. Shashidhar R., Kumar M.S., Arunakumari B.N., Santhosh Kumar R., Patilkulkani S. (2022) "Novel Approach for Steganography to Camouflage Digital Information Using Least Significant Bit". In: Das A.K., Nayak J., Naik B., Dutta S., Pelusi D. (eds) Computational Intelligence in Pattern Recognition. Advances in Intelligent Systems and Computing, vol 1349. Springer, Singapore. https://doi.org/10.1007/978-981-16-2543-5_47.

[7]. B.N. Arunakumari, Aman Rai, Shashidhar R. "An Ameliorated Methodology to Predict Diabetes Mellitus Using Random Forest" Data Science and Data Analytics, 1st Edition, Page no 14, Taylor & Francis 2021

[8]. Sohan N., Ruthuja S.U., Rishab H.S.S., Shashidhar R. (2020) "Smart Assistive Shoes for the Blind." In: Smys S., Iliyasu A.M., Bestak R., Shi F. (eds) New Trends in Computational Vision and Bio-inspired Computing. ICCVBIC 2018. Springer, Cham. https://doi.org/10.1007/978-3-030-41862-5_61

[9]. Swasthik B., Srihari H.N., Kumar M.K.V., Shashidhar R. (2020) "Smart Assist for Alzheimer's Patients and Elderly People". In: Smys S., Iliyasu A.M., Bestak R., Shi F. (eds) New Trends in Computational Vision and Bio-inspired Computing. ICCVBIC 2018. Springer, Cham. https://doi.org/10.1007/978-3-030-41862-5_59

10. Patents: 15
11. Projects/Consultancy: 01
12. Book(s) Published: 01
13. FDPs organised/attended: 10
14. Achievements:

- Research Excellence Award – Top 10 Scholarly Output from JSS Science and Technology University., Mysuru
- Research Excellence Award – Cumulative Publications, from JSS Science and Technology University, Mysuru
- Associate editor, Soft Computing Journal, Springer Nature
- Guest editor, Scientific Reports, Springer Nature

- Editorial contribution award from Scientific Reports, Springer Nature
- Author Service award from Scientific Reports, Springer Nature
- Co-Chair, IEEE Educational Activities Committee, Bangalore Section-2025.
- Secretary, IEEE Mysore subsection-2025.
- Awarded "Best Paper" for the paper titled "Speech Emotion Recognition Based on Speaker and Gender Dependences in Cross- Linguistic" at the seventh International Conference on Computational Intelligence and Communication Technologies CCICT 2025 on 11th -12th April 2025. Organised by B. M Institute of Engineering and Technology, India in Association with St. Andrews Institute of Technology and Management, India.
- Awarded "Best Paper Presenter" for the paper titled "Optimizing EMG Signal Analysis with Advanced Machine Learning Techniques" at the 3rd edition of the International Conference on Science Technology Engineering & Mathematics for Sustainable Development(ICSTEMSD-2025) held on 21st February 2025.
- Awarded "**Best Paper presenter"** for the paper titled "Music Emotion Recognition using convolutional Neural Network for Regional Languages" during IEEE First International Conference on Ambient Intelligence, Knowledge Informatics and Industrial Electronics (AIKIIE-2023) organized by Rao Bahadur Y. Mahabaleswarappa Engineering College, Ballari, 2nd - 3rd November 2023.

- Received Protsahan: Recognition of Research Publications award from IEEE ComSoc Bangaluru Section during Jan 2020 - Sep 2021.
- Received Protsahan: Recognition of Research Publications award from IEEE ComSoc Bangaluru Section during Oct 2021- Sep 2022.

15. Professional Membership:

- Senior Member IEEE,
- Member – IAENG,
- Member – IAENG,
- Member - SCIEI