# Dr. Puranam Revanth Kumar

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https://www.webofscience.com/wos/author/record/AAT-2499-2021

https://www.scopus.com/authid/detail.uri?authorId=57215743776

## Career Objective

Seeking a challenging career with a progressive, result oriented organization which offer ample opportunity to prove, improve and grow in career and professional advancement.

## Education

2024 – 2025 **Post Doctoral Research Fellow,** Centre for Medical Image Analysis, Symbiosis International University, Pune, India.

2019 – 2024 **Ph.D.,** Electronics and Communication Engineering, ICFAI University, Hyderabad, India.
**Thesis Title:** Brain Tissue Segmentation and Analysis of Structural Connectivity using Deep Learning Techniques.

2017 – 2019 **M.Tech,** Control and Instrumentation, AMRITA University, Coimbatore, India.
**Thesis Title:** Machine Vision using LabVIEW for Label Inspection.
**CGPA:** 6.65

2012 – 2016 **B.Tech**, Electronics and Instrumentation, GITAM University, Hyderabad, India.
**Thesis Title:** Wireless Mobile Charger using Inductive Coupling.
**CGPA:** 6.99

## Industry & Teaching Experience

Aug 2025 – Till Date Working as an Assistant Professor in the Department of Artificial Intelligence and Machine Learning, at Malla Reddy University, Hyderabad, India.

Jan 2024 – Aug 2024 Worked as an Assistant Professor in the Department of Artificial Intelligence and Machine Learning, at Malla Reddy University, Hyderabad, India.

Nov 2018 – May 2019 Worked as a LabVIEW Software Trainee in the Department of Vision, Optomech Engineers Pvt. Ltd., Hyderabad, India.

## Technical Skills

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|---|---|
| Research area of Interest | Image Processing, Artificial Intelligence, Deep Learning, Machine Learning, Generative AI, Large Language Models, Neuroimaging, Biomedical Imaging. |
| Programming Languages | MATLAB, Python, LabVIEW, C Language. |

## Research Publications

### Journal Articles

1. Aylapogu Pramod Kumar, B Kalivaraprasad, **Puranam Revanth Kumar**, "Machine Learning Algorithms for Adaptive Beamforming in Smart Antenna Systems", Journal of Nano and Electronic Physics, Vol. 17, No. 6, pp. 06017 – 06021, 2025. **(SCOPUS Q3)** https://jnep.sumdu.edu.ua/en/full_article/4239
2. **Puranam Revanth Kumar,** Gouse Baig Mohammad, Pallati Narsimhulu, Dharnisha Narasappa, Lakshmana Phaneendra Maguluri, Subhav Singh, Shitharth Selvarajan, "Computer Modeling Approaches for Blockchain-Driven Supply Chain Intelligence: A Review on Enhancing Transparency, Security, and Efficiency", Computer Modeling in Engineering & Sciences, vol. 144, Issue 3, pp. 2779-2818, 2025. **IF = 2.5 (SCIE Q2)** https://doi.org/10.32604/cmes.2025.066365
3. **Puranam Revanth Kumar,** B Shilpa, Rajesh Kumar Jha "BrainTract: segmentation of white matter fiber tractography and analysis of structural connectivity using hybrid convolutional neural network", Neuroscience, Vol. 580, pp. 218-230, 2025. **IF = 2.9 (SCIE Q1)** https://doi.org/10.1016/j.neuroscience.2025.06.043
4. Thayyaba Khatoon Mohammed, D N Vasundhara, Syeda Husna Mehanoor, E. Sreedevi, **Puranam Revanth Kumar**, CH Manihass, Shaik Fareed Baba "A Novel Fusion Approach for Advancement in Crime Prediction and Forecasting using Hybridization of ARIMA and Recurrent Neural Networks", Journal of Information Systems Engineering and Management, Vol. 10, Issue 38, pp. 404-420, 2025. **(SCOPUS Q3)** https://doi.org/10.52783/jisem.v10i38s.6863
5. **Puranam Revanth Kumar,** B Shilpa, Rajesh Kumar Jha, and Veni Sree Chellibouina "Spatial Attention U-Net Model with Harris Hawks Optimization for Retinal Blood Vessel and Optic Disc Segmentation in Fundus Images", International Ophthalmology, Vol. 44, Article 359, pp. 1-13, 2024. **IF = 1.4 (SCIE Q2).** https://doi.org/10.1007/s10792-024-03279-3
6. **Puranam Revanth Kumar,** Rajesh Kumar Jha, P Akhendra Kumar, and B Deevena Raju "Improved neurological diagnoses and treatment strategies via automated human brain tissue segmentation from clinical magnetic resonance imaging", Intelligent Medicine, Vol. 4 (3), Pp. 161-169, 2024. **IF = 6.9, (SCIE Q1).** https://doi.org/10.1016/j.imed.2023.10.001
7. **Puranam Revanth Kumar,** Rajesh Kumar Jha, and P Akhendra Kumar "BrainHyperintensities: Automatic Segmentation of White Matter Hyperintensities in Clinical Brain MRI Images using Improved Deep Neural Network", The Journal of Supercomputing, vol. 80, pp. 15545–15581, 2024. **IF = 2.5 (SCIE Q2).** https://doi.org/10.1007/s11227-024-06080-2

8. **Puranam Revanth Kumar,** B Shilpa, Rajesh Kumar Jha, B Deevena Raju, and Thayyaba Khatoon Mohammed, "Inpainting Non-Anatomical Objects in Brain Imaging using Enhanced Deep Convolutional Autoencoder Network", Sadhana, vol. 49, article number 181, pp. 1-13, 2024**. IF = 1.4 (SCIE Q2).** https://doi.org/10.1007/s12046-024-02536-6

9. **Puranam Revanth Kumar,** B Shilpa, and Rajesh Kumar Jha "Brain disorders: Impact of mild SARS-CoV-2 may shrink several parts of the brain", Neuroscience & Biobehavioral Reviews, vol. 149, p.105150, 2023. **IF = 7.5 (SCI Q1).** https://doi.org/10.1016/j.neubiorev.2023.105150

10. **Puranam Revanth Kumar**, Rajesh Kumar Jha, and Amogh Katti "Brain Tissues Segmentation in Neurosurgery: A Systematic Analysis for Quantitative Tractography Approaches" Acta Neurologica Belgica, vol. 124, pp. 1-15, 2023. **IF = 2.5, (SCIE Q2)**. https://doi.org/10.1007/s13760-023-02170-9

11. B Shilpa, **Puranam Revanth Kumar**, and Rajesh Kumar Jha, "LoRa DL: a deep learning model for enhancing the data transmission over LoRa using autoencoder", The Journal of Supercomputing, vol. 79, pp. 17079 – 17097, 2023. **IF = 2.5 (SCI Q2).** https://doi.org/10.1007/s11227-023-05355-4

12. **Puranam Revanth Kumar,** B Shilpa, Rajesh Kumar Jha, and Sachi Nandan Mohanty, "A novel end-to-end approach for epileptic seizure classification from scalp EEG data using deep learning technique", International Journal of Information Technology, vol. 15, pp. 4223–4231, 2023. https://doi.org/10.1007/s41870-023-01428-y. **(ESCI Q2)**

13. Roop Ranjan, Dilkeshwar Pandey, Ashok Kumar Rai, Deepak Gupta, Pawan Singh, **Puranam Revanth Kumar**, and Sachi Nandan Mohanty, "A Manifold-Level Hybrid Deep Learning Approach for Sentiment Classification Using an Autoregressive Model", Applied Sciences, vol. 13, no. 5, p.3091, 2023. **IF = 2.83 (SCIE Q2).** https://doi.org/10.3390/app13053091

14. N. Arivazhagan, K. Somasundaram, Gouse Baig Mohammad, **Puranam Revanth Kumar** et al., "Cloud-Internet of Health Things (IOHT) Task Scheduling Using Hybrid Moth Flame Optimization with Deep Neural Network Algorithm for E Healthcare Systems", Scientific Programming, Volume 2022, Article ID 4100352, pp. 1-12, 2022. **IF = 1.67 (SCIE Q3).** https://doi.org/10.1155/2022/4100352

15. **Puranam Revanth Kumar**, Gouse Baig Mohammad, and P Dileep, "Real-Time Heart Rate Monitoring System using Least Square Method", Annals of the Romanian Society for Cell Biology, vol. 25, Issue. 6, pp. 16302 – 16308, 2021. https://www.annalsofrscb.ro/index.php/journal/article/view/8878

16. Gouse Baig Mohammad, Shitharth, and **Puranam Revanth Kumar**, "Integrated Machine Learning Model for an URL Phishing Detection", International Journal of Grid and Distributed Computing, vol. 14, Issue 1, pp: 513-529, 2021. **(ESCI)**. http://sersc.org/journals/index.php/IJGDC/article/view/35886

17. **Puranam Revanth Kumar**, and T Ananthan "Machine Vision using LabVIEW for Label Inspection", Journal of Innovation in Computer Science and Engineering (JICSE), Vol.9, Issue 1, pp: 58 - 62, 2019. https://www.indianjournals.com/ijor.aspx?target=ijor:jicse&volume=9&issue=1&article=010

18. **Puranam Revanth Kumar** "Wireless Mobile Charger using Inductive coupling", Journal of Emerging Technologies and Innovative Research (JETIR), Vol.5, Issue 10, pp: 40-44, 2018. **(UGC).** https://www.jetir.org/view?paper=JETIRJ006007

## Conference Proceedings

1. Naga Venkata Chaitanya Akula, **Puranam Revanth Kumar**, G Gifta Jerith, Rallabandi Varshith, Ouragani Sreeja, Mangalapally Prashanth, "Quantum Computing Based Edge Intelligence for Enhancing the Efficiency and Scalability of IoT Applications", 3rd International Conference on Computational Intelligence and Network Systems (CINS), pp. 1-6, 2026. 10.1109/CINS67018.2025.11412152
2. Saisuman Singamsetty, Sudheer Singamsetty, S Satyanarayana, **Puranam Revanth Kumar** "Next-Generation Digital Twin Analytics in Smart Manufacturing using Cross-Layered Edge Cloud Deep Learning", IEEE 5th International Conference on AI in Cybersecurity (ICAIC), Houston, USA, pp. 1-6, 2026. 10.1109/ICAIC67076.2026.11395731
3. B. Shilpa, Shaik Abdul Nabi, G. Sudha Reddy, **Puranam Revanth Kumar**, Thayyaba Khatoon Mohammed, "Securing IoMT: Intrusion Detection to Improve Medical Data Security on Internet of Medical Things Using Machine Learning Techniques", 9th International Conference on Smart Trends in Computing and Communications, vol 1458, pp. 425-437, 2025. https://doi.org/10.1007/978-981-96-7499-2_36
4. Thayyaba Khatoon Mohammad, **Puranam Revanth Kumar**, Gifta Jerith, and E. Krishnaveni Reddy, "Multimodal Language Models for End-to-End Automated Speech Recognition Using Bidirectional Recurrent Neural Network", 14th International Advanced Computing Conference, vol. 2434, pp. 33 – 47, 2025. https://doi.org/10.1007/978-3-031-84602-1_3
5. **Puranam Revanth Kumar,** Thayyaba Khatoon Mohammad, Aylapogu Pramod Kumar, Ruslan Kassym, Tolegenova A. S, and Tlenshieva Akmaral, "Synthesizing Multi-Modal Imaging for Enhanced Brain Mapping in Neurology: A State-of-the-art Review", 5th International Conference on Communications, Information, Electronic and Energy Systems (CIEES), pp. 1-6, 2025. 10.1109/CIEES62939.2024.10811448.
6. A. Pramod Kumar, D. M. Sudan, P. V. Sai Charisma, N. Agarwal and **Puranam Revanth Kumar**, "A Novel Antenna Design and Analysis for 5G mm Wave Broadband Systems," 21st India Council International Conference (INDICON), Kharagpur, India, 2025, pp. 1-4. 10.1109/INDICON63790.2024.10958533
7. A. Pramod Kumar, **Puranam Revanth Kumar** and N. Agarwal, "Design and Implementation of Partially Static High Frequency DFF for Low Power Applications", 3rd International Conference on Applied Electromagnetics, Signal Processing, & Communication (AESPC), pp. 1-4, 2024. 10.1109/AESPC59761.2023.10390340
8. **Puranam Revanth Kumar,** Rajesh Kumar Jha, and P Akhendra Kumar, "Segmentation of White Matter Lesions in MRI Images Using Optimization-based Deep Neural Network", 4th International Conference on Image Processing and Capsule Networks, vol. 798, pp. 253-267, 2023. https://doi.org/10.1007/978-981-99-7093-3_17
9. B Shilpa, **Puranam Revanth Kumar**, Rajesh Kumar Jha, "Spreading Factor Optimization for Interference Mitigation in Dense Indoor LoRa Networks", IEEE IAS Global Conference on Emerging Technologies (GlobConET), pp. 1-5, 2023. 10.1109/GlobConET56651.2023.10149925
10. H. Siriwardana, Kamakhya Narain Singh, **Puranam Revanth Kumar**, Chinmay Misra, "Automated Road Crossing System Using Real-Time Object Tracking", 10th International Conference on Reliability, Infocom Technologies and Optimization (ICRITO), pp. 1-5, 2022. 10.1109/ICRITO56286.2022.9964963

11. **Puranam Revanth Kumar**, Sangeetha K, Rabi Narayan Satpathy, and S N Mohanty "A Comprehensive analysis on EEG Signal Classification on Human Brain", 9th International Conference on Reliability, Infocom Technologies and Optimization (ICRITO), pp. 1-6, 2021. 10.1109/ICRITO51393.2021.9596296
12. **Puranam Revanth Kumar**, Sachi Nandan Mohanty, Achyuth Sarkar, and P Pavan Kumar "Segmentation of White Blood Cells using Image Segmentation Algorithms", 5th International Conference on Computing, Communication and Security (ICCCS), pp. 1-4, 2020. 10.1109/ICCCS49678.2020.9277312
13. **Puranam Revanth Kumar** "Position Control of a Stepper Motor using LabVIEW" 3rd International Conference on Recent Trends in Electronics, Information Communication Technology (RTEICT), pp. 1551 - 1554, 2018. 10.1109/RTEICT42901.2018.9012597

### Book Chapters

1. Boddu Vikas, Shalini Ramanathan, Gouni Sucharitha, Sirisha Potluri, **Puranam Revanth Kumar**, Kornaganti Manasa Mrunaalini, Koppineni Dheeptha, "An Improved Ensemble Classifier Model to Combat the Escalating Threat of Viral Infections", Intelligent Data-Driven Systems with Innovations in Artificial Intelligence, CRC Press, pp. 1-11, 2025. https://doi.org/10.1201/9781003613206
2. **Puranam Revanth Kumar**, Amogh Katti, Sachi Nandan Mohanty, and Surender Nath Senapati, "A Deep Learning-based approach for an Automated Brain Tumor Segmentation in MR images", Pattern Recognition and Data Analysis with Applications, vol 888, pp. 87-97, 2022. https://doi.org/10.1007/978-981-19-1520-8_7
3. **Puranam Revanth Kumar** and B. Shilpa, "An IoT-Based Smart Healthcare System with Edge Intelligence Computing", Reconnoitering the Landscape of Edge Intelligence in Healthcare, CRC Press, pp. 31-46, 2024. https://doi.org/10.1201/9781003401841

## Editorial Activities

1. Topic Editor, Advanced Computational Models for Neural Dynamics and Cognition, Frontiers in Neuroscience, 2026. **IF = 3.2 SCI**
2. Guest Editor, Journal of Discrete Mathematical Sciences and Cryptography, Taru Publication, 2025. **SCOPUS**
3. Co-Guest Editor, Recent Patents on Engineering, Bentham Science, 2025. **SCOPUS.**
4. Guest Editor, Journal of Information and Optimization Sciences, Taru Publication, 2024. **IF = 1.2 WOS**.

## Awards

**1.** Received **Best Poster Award** for presenting research work at the *16th Student Research Conference on Applied Computing (SRC 2025)*, Zayed University, Dubai, UAE, 2025.

**Title:** Design and Development of a Real-Time Intelligent Vision-and-Voice-Based Navigation System using Deep Learning and Large Language Models.

## International Conference Session Organizer

1. International Engineering Data analytics and management Conference (EAMCON -2025) at Universiti Teknikal Malaysia, November 26th and 27th 2025, as Session Organizer.

2. 2nd International Conference on Artificial Intelligence, Computation, Communication, and Network Security (AICCoNS 2026) at University of Wollongong in Dubai, April 28th to 30th 2026, as Session Organizer.
3. 2nd International Engineering Data analytics and management Conference (EAMCON -2026) at Shinawatra University, Thailand, July 8th to 10th 2026, as Session Organizer.

## Certification

**Deep Learning** Awarded by NPTEL

**Machine Learning** Awarded by Coursera

## Reviewer

1. EAI ICISML 2025 – 5th International Conference on Intelligent Systems and Machine Learning (ICISML), NIT Meghalaya, India
2. EAI ICISML 2022 – 1st EAI International Conference on Intelligent Systems and Machine Learning, Vardhaman College of Engineering, Hyderabad, India.
3. 4th International Conference on Machine Intelligence and Signal Processing (MISP-2022), National Institute of Technology (NIT), Raipur, India.
4. 9th International Conference on Reliability, Infocom Technologies and Optimization (ICRITO'2021), Amity University, Noida, India.
5. 3rd International Conference on Machine Intelligence and Signal Processing (MISP-2021), NIT Arunachal Pradesh, India.

## Technical Program Committee Member

1. International Conference on Intelligent Systems and Machine Learning (ICISML -2025) at National Institute of Technology (NIT) Meghalaya, May 16th and 17th 2025, as Session Chair.
2. 5th International Conference on Intelligent Systems and Machine Learning (ICISML -2025) at National Institute of Technology (NIT) Meghalaya, May 16th and 17th 2025, as Session Chair.
3. 1st International Conference on Knowledge Engineering and Artificial Intelligence (ICKEAI-2024) at St.Peter's Engineering College, Hyderabad, from February 16th and 17th 2024, as Session Chair.
4. 3rd EAI International Conference on Intelligent Systems and Machine Learning (ICISML -2024) at G H Raisoni Institute of Engineering and Technology, Pune, from January 5th and 6th 2024, as Session Chair.
5. 2nd EAI International Conference on Intelligent Systems and Machine Learning (ICISML -2023) at Sri Sri University, Cuttack, Odisha from July 27th – 28th 2023, as Session Chair.
6. 1st EAI International Conference on Intelligent Systems and Machine Learning (ICISML -2022) at Vardhaman College of Engineering, Hyderabad from December 16th – 17th 2022, as Session Chair.
7. 4th International Conference on Machine Intelligence and Signal Processing (MISP 2022), at NIT Raipur from March 12th – 14th 2022, as Session Chair.

## Membership in Professional Organizations

2021 – Present: Member IEEE, Member no – 93587558
2025 – Present: International Association of Engineers (IAENG) – 543911

## FDP Attended/Keynote Speaker

1. Participated in 12-Days online **FDP** on "Introduction to Robotics (ROB-1)" from 9th to 20th February, 2026 Jointly organized by IIT Roorkee, NIT Patna, IIT Kanpur, MNIT Jaipur, India.
2. Participated in 5-Day **FDP** on "From Classical to Quantum: Machine Learning in the Era of Quantum Computing" from 9th to 14th December, 2025 at AVN Institute of Engineering and Technology, India.
3. Participated in 5-Day **FDP** on "Quantum Frontiers: Algorithms, and Applications for Next Generation Computing" from 11th to 15th November, 2025 at VIT-AP University, India.
4. Contributed as **Keynote Speaker** at the DHR-ICMR funded "Unified Genomics Frontier" Workshop 2025 on 14th and 15th July at Malla Reddy Medical College for Women, Malla Reddy Vishwavidyapeeth, India.
5. Participated in 5-Day Online **FDP** on "Statistics & Optimization Techniques Using Software Packages" from 25th to 29th October, at Aligarh Muslim University, New Delhi, October 2021.
6. Participated in 5-Day Online **FDP** on "Industrial Applications of Machine Learning and Artificial Intelligence" from 6th to 10th September, at Manipal University Jaipur, September 2021.
7. Participated in 12 – Days Online **PDP** on "Digital Tools for Writing, Authoring and reviewing manuscripts" from 12 to 23rd July 2021, at Atal Bihari Vajpayee Vishwavidyalaya Bilaspur, Chhattisgarh, India.
8. Participated in 5-Day Online **FDP** on "Blockchain Technology & Cryptocurrency" from 19th to 23rd April, Vardhaman College of Engineering, Hyderabad, April 2021.

## Personal Data

**Date of Birth:** 19th August 1994

**Nationality:** Indian

**Languages:** Telugu, Hindi, English

**Gender:** Male

**Marital Status:** Married.

## Declaration

I hereby declare that the information furnished above is true to the best of my knowledge

**Dr. Puranam Revanth Kumar**