

List of Publications

1. A. Karthik, Sridhar Patthi, B. Uma Maheswari, J. Sirisha Devi, Abhaya Kumar Pradhan, G. Balaji, G. Nallasivan & Rajaram, A. (2024). Advancing idiopathic pulmonary fibrosis prognosis through integrated CNN-LSTM predictive modeling and uncertainty quantification. *Biomedical Signal Processing and Control*, Volume 100, Part C, February 2025, 106811. <https://doi.org/10.1016/j.bspc.2024.106811>, Impact Factor 4.9 (**Scopus & SCI, Q1**).
2. A. Karthik, Santosh Kumar Sahoo, Ajay Kumar, Nileshkumar Patel, P. Chinnaraj, Lakshmana Phaneendra Maguluri, Mohammed shuaib & Rajaram, A. (2024). Unified approach for accu-rate brain tumor multi-Classification and segmentation through fusion of advanced methodolo-gies. *Biomedical Signal Processing and Control*, Volume 100, Part A, February 2025, 106872. <https://doi.org/10.1016/j.bspc.2024.106872>, Impact Factor 4.9 (**Scopus & SCI, Q1**).
3. Chinnadurai, J., Karthik, A., Ramesh, J. V. N., Banerjee, S., Rajlakshmi, P. V., Rao, K. V., Sudarvizhi, D., & Rajaram, A. (2024). Enhancing online education recommendations through clustering-driven deep learning. *Biomedical Signal Processing and Control*, 97, 106669. DOI: <https://doi.org/10.1016/j.bspc.2024.106669> Impact Factor 4.9 (**Scopus & SCI, Q1**).
4. Karthik, A., Hamatta, H. S. A., Patthi, S., Krubakaran, C., Pradhan, A. K., Rachapudi, V., Shuaib, M., & Rajaram, A. (2024). Ensemble-based multimodal medical imaging fusion for tumor segmen-tation. *Biomedical Signal Processing and Control*, 96, Part B, 106550. <https://doi.org/10.1016/j.bspc.2024.106550> Impact Factor 4.9. (**Scopus & SCI, Q1**).
5. Karthik, A., Aalam, S. S., Sivakumar, M., Sundari, M. V. R., Rose, J. D., Elangovan, M., & Rajaram, A. (2024). Improving brain tumor treatment with better imaging and real-time therapy using quantum dots. *Biomedical Signal Processing and Control*, 95, Part B, 106286. <https://doi.org/10.1016/j.bspc.2024.106286> Impact Factor 4.9. (**Scopus & SCI, Q1**).
6. Karthik, A., Mazher Iqbal, J.L. An optimized convolutional neural network for speech enhance-ment. *Int J Speech Technol* 26, 1117–1129 (2023). <https://doi.org/10.1007/s10772-023-10073-6> Impact Factor 2.74 (**Scopus, Q1**).
7. Annam, K., G, S. K., P, A. B., & Domala, N. (2023). Automatic Detection of Brain Tumors Using Ge-netic Algorithms with Multiple Stages in Magnetic Resonance Images. *Journal of Automation, Mo-bile Robotics and Intelligent Systems*, 16(4), 36-43. <https://doi.org/10.14313/JAMRIS/4-2022/31> (**Scopus**).
8. Iqbal, J. L. M., Kumar, M. S., Mishra, G., Asha, G. R., Saritha, A. N., Karthik, A., & Kotaiah, B. (2023). Facial emotion recognition using geometrical features based deep learning techniques. *International Journal of Computers Communications & Control*, 18(4). <https://doi.org/10.15837/ijccc.2023.4.4644> Impact factor 2.92 (**Scopus & SCI**).
9. Sathyanarayan, P. U., Mohan, M., Kakde, S., & Karthik, A. (2024). Efficient carry selects 16-bit square root adder with complementary metal-oxide semiconductor implementation. *Indonesian Journal of Electrical Engineering and Computer Science*, 26(1). <http://doi.org/10.11591/ijeecs.v26.i1.pp172-183> Impact Factor 1.94. (**Scopus**).
10. Karthik, A., MazherIqbal, J.L. Efficient Speech Enhancement Using Recurrent Convolution En-coder and Decoder. *Wireless Pers Commun* 119, 1959–1973 (2021). <https://doi.org/10.1007/s11277-021-08313-6> Impact Factor 1.9. (**Scopus & SCI**)

11. Indira, D. N. V. S. L. S., Ganiya, R. K., Babu, P. A., Xavier, A. J., Kavisankar, L., Hemalatha, S., Senthilkumar, V., Kavitha, T., Rajaram, A., Annam, K., & Yeshitla, A. (2022). [Retracted] Improved artificial neural network with state order dataset estimation for brain cancer cell diagnosis. *BioMed Research International* <https://doi.org/10.1155/2022/7799812>, Impact Factor 2.27. **(Scopus & SCI)**
12. A. Karthik, Dr. J.L Mazher Iqbal. (2020). Performance estimation based recurrent-convolutional encoder decoder for speech enhancement. *International Journal of Advanced Science and Technology*, 29(05), 772 - 777. DOI <http://serisc.org/journals/index.php/IJAST/article/view/9611>, Impact Factor 6.78. **(Scopus)**
13. Kumar, K. A., & Karthik, A. (2019). GUI Based Execution of Discourse Upgrade System. *International Journal of Engineering and Advanced Technology (IJEAT)*, 8(6S3), 2151-2155. <https://doi.org/10.35940/ijeat.F1415.0986S319> **(Scopus)**
14. Venkateswarlu, S. C., Kumar, N. U., Kumar, N. S., Karthik, A., & Vijay, V. (2019). Implementation of area optimized low power multiplication and accumulation. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, 9(1), 2928-2932. <https://doi.org/10.35940/ijitee.A9110.119119> **(Scopus)**

International Conferences

1. S. Panda, A. Karthik, P. S. Reddy and B. S. Ganesh, "Location Based Reminder App: GeoTasker," 2026 International Conference on Communication, Computing and Emerging Technologies (IC3ET), Vasai, India, 2026, pp. 40-46, doi: 10.1109/IC3ET64989.2026.11467512. **(Scopus)**
2. A. Karthik, K. Vidhula Reddy, B. Shravya and N. Abheram, "A Production-Ready Framework for Unified Multi-Role Educational Environments," 2026 International Conference on AI-Driven Smart Systems and Ubiquitous Computing (ICAUC), Pathum Thani, Thailand, 2026, pp. 319-325, doi: 10.1109/ICAUC68182.2026.11441185. **(Scopus)**
3. T. Lakshitha, A. Sulthana, S. L. Adithya and A. Karthik, "Analyzing Public Sentiment in Social Media Using Hybrid NLP Frameworks," 2025 5th Asian Conference on Innovation in Technology (ASIANCON), PIMPRI, India, 2025, pp. 1-8, doi: 10.1109/ASIANCON66527.2025.11281216 **(Scopus)**
4. Karthik A., Naresh B., Pavan A., ...Nithish D."A Smart Mobile-based Application for an Enhanced Health Management System"16th International Conference on Advances in Computing Control and Telecommunication Technologies Act 2025, 2025 **(Scopus)**
5. S. Maryala, V. Kommula, S. Kumarapu and K. A, "Micro-expression Analysis for Security and Law Enforcement using Deep Learning," 2025 International Conference on Emerging Smart Computing and Informatics (ESCI), Pune, India, 2025, pp. 1-6, doi: 10.1109/ESCI63694.2025.10988116. **(Scopus)**
6. G. B. Raj, C. R. Mohan, A. Karthik, A. Nagpal, M. V. Laxmi and V. Asha, "Remote Monitoring and Control of Agricultural Systems Using IoT and Machine Learning," 2024 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2024, pp. 1-6, doi: 10.1109/ACCAI61061.2024.10602186. **(Scopus)**
7. G. Manoharan, V. Kumar, A. Karthik, V. Asha, C. R. Mohan and G. Nijhawan, "IoT-Based Smart Inventory Management System Using Machine Learning Techniques," 2024 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2024, pp. 1-5, doi: 10.1109/ACCAI61061.2024.10601903. **(Scopus)**
8. G. Manoharan, S. D. N. H. Ali, D. M. Sathe, A. Karthik, A. Nagpal and A. Sidana, "Fraud Detection

- in E-commerce Transactions: A Machine Learning Perspective," 2024 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2024, pp. 1-5, doi: 10.1109/ACCAI61061.2024.10601813. **(Scopus)**
9. P. Ranawat, M. Kumar, A. Karthik, A. V, A. Nagpal and B. Shaik, "Deep Learning Techniques for Human Resource Management Optimization," 2024 International Conference on Communication, Computer Sciences and Engineering (IC3SE), Gautam Buddha Nagar, India, 2024, pp. 1468-1472, doi: 10.1109/IC3SE62002.2024.10592919. **(Scopus)**
 10. G. Manoharan, S. D. N. H. Ali, M. Sathe, A. Karthik, A. Nagpal and A. Sidana, "IoT-Based Crop Disease Detection and Management System Using Machine Learning Algorithms," 2024 International Conference on Science Technology Engineering and Management (ICSTEM), Coimbatore, India, 2024, pp. 1-5, doi: 10.1109/ICSTEM61137.2024.10561056. **(Scopus)**
 11. S. Yadav, M. Rajendran, A. Nagpal, A. Karthik, K. Aravinda and B. T. Geetha, "Exploring the Potential of Machine Learning in Enhancing Agricultural Practices and Food Production," 2024 IEEE 13th International Conference on Communication Systems and Network Technologies (CSNT), Jabalpur, India, 2024, pp. 663-669, doi: 10.1109/CSNT60213.2024.10546234. **(Scopus)**
 12. Karthik, A., et al. "Biomass and Operational Initiatives for Sustainable Bioenergy Generation." E3S Web of Conferences, vol. 529, 2024, p. 02014, <https://doi.org/10.1051/e3sconf/202452902014>. **(Scopus)**
 13. A. Karthik, N. Domala and G. Sunil Kumar, "An Overview of Low-Power VLSI Design Methods for CMOS and CNTFET-Based Circuits," 2023 International Conference on Computer Communication and Informatics (ICCCI), Coimbatore, India, 2023, pp. 1-4, doi: 10.1109/ICCCI56745.2023.10128227. **(Scopus)**
 14. G. Ranjith Kumar, N. S. Govekar, A. Karthik, G. Nijhawan, A. H. Alawadi and A. V, "Real-Time Monitoring and Anomaly Detection in Hospital IoT Networks Using Machine Learning," 2023 International Conference on Artificial Intelligence for Innovations in Healthcare Industries (ICAI-IHI), Raipur, India, 2023, pp. 1-8, doi: 10.1109/ICAIIHI57871.2023.10489821. **(Scopus)**
 15. A. Karthik, A. V, T. B. Ramu, R. R. Sharma, G. Nijhawan and Z. S. Mohsen, "Evaluating Topological Insulator-Based FETs in Circuit-Level Performance with Advanced Device Simulations," 2023 International Conference on Power Energy, Environment & Intelligent Control (PEEIC), Greater Noida, India, 2023, pp. 734-738, doi: 10.1109/PEEIC59336.2023.10451508. **(Scopus)**
 16. J. Lande, S. Mehra, G. S. Bhadauria, G. Nijhawan, A. Karthik and A. Sravani, "Managing Cloud Computing Assets for Scalability and Cost Efficiency," 2023 10th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON), Gautam Buddha Nagar, India, 2023, pp. 573-576, doi: 10.1109/UPCON59197.2023.10434392. **(Scopus)**
 17. A. Karthik, A. V, G. Nijhawan, A. Rana, I. Khan and Z. L. Naser, "Quantum Signal Processing: A New Frontier in Information Processing," 2023 10th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON), Gautam Buddha Nagar, India, 2023, pp. 1527-1532, doi: 10.1109/UPCON59197.2023.10434630. **(Scopus)**
 18. A. Karthik, B. Sharanya, K. Reshma and S. K. Vunguturi, "Cardiac Left Ventricle Segmentation using Recurrent U-Net and Level Set with Short Axis MRI Images," 2022 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2022, pp. 1-6, doi: 10.1109/ACCAI53970.2022.9752468. **(Scopus)**
 19. J. L. M. Iqbal and A. Karthik, "Speech Enhancement Techniques in the Digital, Analog, and Hybrid Domains," 2022 International Conference on Computer Communication and Informatics (ICCCI), Coimbatore, India, 2022, pp. 1-3, doi: 10.1109/ICCCI54379.2022.9740883. **(Scopus)**

20. R. R. Vallabhuni, A. Karthik, C. V. Sai Kumar, B. Varun, P. Veerendra and S. Nayak, "Comparative Analysis of 8-Bit Manchester Carry Chain Adder Using FinFET at 18nm Technology," 2020 3rd International Conference on Intelligent Sustainable Systems (ICISS), Thoothukudi, India, 2020, pp. 1579-1583, doi: 10.1109/ICISS49785.2020.9316061. **(Scopus)**
21. M. Saritha et al., "Pipelined Distributive Arithmetic-based FIR Filter Using Carry Save and Ripple Carry Adder," 2021 2nd International Conference on Communication, Computing and Industry 4.0 (C2I4), Bangalore, India, 2021, pp. 1-6, doi: 10.1109/C2I454156.2021.9689396. **(Scopus)**
22. S. C. Venkateswarlu, N. U. Kumar and A. Karthik, "Speech Enhancement Using Recursive Least Square Based on Real-time adaptive filtering algorithm," 2021 6th International Conference for Convergence in Technology (I2CT), Maharashtra, India, 2021, pp. 1-4, doi: 10.1109/I2CT51068.2021.9417929. **(Scopus)**
23. D. Narsaiah, R. S. Reddy, A. Kokkula, P. A. Kumar and A. Karthik, "A Novel Full Reference-Image Quality Assessment (FR-IQA) for Adaptive Visual Perception Improvement," 2021 6th International Conference on Inventive Computation Technologies (ICICT), Coimbatore, India, 2021, pp. 726-730, doi: 10.1109/ICICT50816.2021.9358610. **(Scopus)**
24. D. R. V. A. S. Kumar, N. Domala, A. Karthik and B. Veena, "CMOS Phase Detector and Phase-Frequency Detector Power and Delay Estimation Using Nano Dimensional MOS Transistors," 2021 5th International Conference on Electronics, Communication and Aerospace Technology (ICECA), Coimbatore, India, 2021, pp. 331-334, doi: 10.1109/ICECA52323.2021.9675950. **(Scopus)**
25. H. Sangeeta, P. Ashok Kumar, K. Srinivasulu, A. Karthik and G. S. Kumar, "Fungus Detection System Built in an Efficient and Modest Embedded System," 2022 International Conference on Computer Communication and Informatics (ICCCI), Coimbatore, India, 2022, pp. 1-5, doi: 10.1109/ICCCI54379.2022.9740825. **(Scopus)**
26. Venkateswarlu, S. C., Udaya Kumar, N., & Karthik, A. (2021). Wavelet Region implanting watermark upgrades the security framework in Digital Speech Watermarking. IOP Conference Series: Materials Science and Engineering, 1084, 012013. <https://doi.org/10.1088/1757-899X/1084/1/012013> **(Scopus)**

Patents

1. A Karthik, Adaptive Language Learning Platform: Contextual Feedback Mechanism, File No: 202421037347, date of file: 12-05-2024. Date of publication: 14-06-2024.
2. A Karthik, Autonomous Vehicles Millimeter-Wave Radar System: Development and Applications, File No: 202441039476, date of file: 20-05-2024. Date of publication: 31-05-2024.
3. A Karthik, Deep Reinforcement Learning for Energy-Efficient Computation Offloading with DVFS for Time-Critical IoT Applications in Edge Computing, File No: 202341046984, date of file: 12-07-2023. Date of publication: 01-09-2023.
4. A Karthik, Fog-IoT Framework Deployment for Handling Performance Metrics on an Assortment of Internet of Things Devices, File No: 202341041353, date of file: 17-06-2023. Date of publication; 01-09 2023.
5. A Karthik, Machine Learning-Based Nutrition Monitoring and Health Awareness System Based on Crowd Sourced Food Images, File No: 202341038412, date of file: 03-06-2023. Date of publication; 18-08 2023.
6. A Karthik, Internet of Things (IoT) With Ai-Based Railway Crossing Traffic Monitoring Using Deep Learning, File No: 201941024539, date of file: 30-10-2022. Date of publication: 14-10-2022.

7. A Karthik, Tracking the Maximum Power Point of Photovoltaic Grids Using Machine Learning and IoT, File No: 202241058661, date of file:13-10-2022. Date of publication;18-11-2022.
8. A Karthik, IoT Integrated Fractional Order Control of Doubly Fed Induction Generator-Based Wind Energy System Powered by Artificial Intelligence, File No: 202241061015, date of file:26-10-2022. Date of publication;18-11-2022.
9. A Karthik, AI and The Internet of Things (IOT) Are Used Together to Make a Safe Routing Algo-rithm For Mobile Ad-Hoc Networks That Saves Energy, File No: 202241064060, date of file:09-11-2022. Date of publication;25-11-2022.
10. A Karthik, Internet of Things and Radio Frequency Identification Enabled Smart Cities for Pollution Monitoring from Vehicles, File No: 202241070929, date of file: 18-12-2022. Date of publication;16 12-2022.
11. A Karthik, Analysis of Potential Health and Environmental Risks Associated With 6g Wireless Communication Networks, File No: 202241070445, date of file: 06-12-2022. Date of publication;09-12-2022.
12. A Karthik, Implementing Machine Learning and Deep Neural Networks To Analyse Stock Market Trends and Assess The Accuracy Of Market Predictions, File No: 202341001183, date of file: 05-01-2023. Date of publication;13-01-2023.
13. A Karthik, IOT Based Patients' Health Observation System Using 6g Artificial Intelligence, File No: 202311003450, date of file: 17-01-2023. Date of publication;20-01-2023.
14. A Karthik, Analysing Employee Motivation and The Way It Affects Organisational Productivity With Businesses From The Private And Public Sectors, File No: 202321030472, date of file: 27-04-2023. Date of publication;02-06-2023.
15. A Karthik, Automation, Intelligent, And Smart Systems Using Ai-Based Modeling: Methods, Ap-plica tions, And Research Issues, File No: 202311031916, date of file: 04-05-2023. Date of publica-tion;09 06-2023.
16. A Karthik, Modern Commercial Banks' Risk Management Analysis Using Behavioural Finance The-ory and Artificial Neural Networks, File No: 202341031325, date of file: 02-05-2023. Date of publication;16 06-2023.
17. A Karthik, The Performance of Switched-Reluctance Motors for Electric Vehicle Applications Can be Significantly Improved by Implementing Predictive Current Control, File No: 202341032548, date of file: 08-05-2023. Date of publication;23-06-2023.
18. A Karthik, Nano-Thymoquinone (TQ) as High-Performance Drug Targeting Vehicle for Liver, File No: 202341032842, date of file: 09-05-2023. Date of publication;23-06-2023.
19. A Karthik, Histopathological images are used to automatically identify various types of lung cancer using a lightweight, end-to-end CNN approach, File No: 202341040413, date of file: 14-06-2023. Date of publication;18-08-2023.
20. A Karthik, A Method for Hierarchical Machine Learning For An Industrial Plant Machine Learning System, File No: 202141055544, date of file: 30-11-2021. Date of publication;10-12-2021