

Student Publication (2023-2024)

List of Journal Publication

- [1]. Reddy, K. V., **Reddy, B. K.**, Goutham, V., Mahesh, M., Nisha, J. S., Palanisamy, G., ... & Ramkumar, V. (2024). Edge AI in sustainable farming: Deep learning-driven IoT framework to safeguard crops from wildlife threats. *IEEE Access*, 12, 77707-77723. **DOI:** 10.1109/ACCESS.2024.3406585
- [2]. Ramalakshmi, K., Rajagopal, S., Kulkarni, M. B., & **Poddar, H.** (2024). A hyperdimensional framework: Unveiling the interplay of RBP and GSN within CNNs for ultra-precise brain tumor classification. *Biomedical Signal Processing and Control*, 96, 106565. **DOI:** 10.1016/j.bspc.2024.106565
- [3]. Bhattacharya, S., Kumar, A., **Krishav, K.**, Panda, S., Vidhyapathi, C. M., Sundar, S., & Karthikeyan, B. (2024). Self-adaptive waste management system: Utilizing convolutional neural networks for real-time classification. *Engineering Proceedings*, 62(1), 5. **DOI:** 10.3390/engproc2024062005
- [4]. Ramalakshmi, K., Srinivasa Raghavan, V., Rajagopal, S., Krishna Kumari, L., Theivanathan, G., Kulkarni, M. B., & **Poddar, H.** (2024). An extensive analysis of artificial intelligence and segmentation methods transforming cancer recognition in medical imaging. *Biomedical Physics & Engineering Express*, 10(4), 045046. **DOI:** 10.1088/2057-1976/ad555b
- [5]. Thiagarajan, J.D., Kulkarni, S.V., Jadhav, S.A., Waghe, A.A., Raja, S.P., Rajagopal, S., **Poddar, H.** and Subramaniam, S. (2024). Analysis of banana plant health using machine learning techniques. *Scientific Reports*, 14(1), 15041. **DOI:** 10.1038/s41598-024-63930-y
- [6]. Dutta, D., **Tumukunta, S. P.**, Sivaraaj, N. R., & Majeed, K. A. (2024). Exploring the landscape of phase-locked loop architectures: A comprehensive review. *IEEE Access*, 12, 125523-125543. **DOI:** 10.1109/ACCESS.2024.3446393
- [7]. **AT, M. R.**, B, B., RR, S. A. P., Naidu, R. C., M, R. K., Ramachandran, P., ... & Siddiqui, A. M. (2024). Intelligent energy management across smart grids deploying 6G IoT, AI, and blockchain in sustainable smart cities. *IoT*, 5(3), 560-591. **DOI:** 10.3390/iot5030025
- [8]. **Hitesh D.**, Saiteja V., & Ravikumar C. V. (2024). Channel Prediction for Underwater MIMO Communications Using Adaptive Bidirectional Gated Recurring Unit. *ARPJ Journal of Engineering and Applied Sciences*, 19 (14), 904-911. **DOI:** 10.59018/072421
- [9]. **Nithin, N.**, Suhaib Rehman, S., Ravikumar C., V. & Rajeev Pankaj, N. (2024). Performance Analysis of Underwater Wireless Sensor Networks Using Reinforcement Learning. *ARPJ Journal of Engineering and Applied Sciences*, 19 (13), 804-814. **DOI:** 10.59018/072411
- [10]. Chaudhary, A., Mittal, K., **Tejpal, B.**, Thakur, K., Varughese, D. A., & Sridevi, S. (2025). Enhancing CNN Performance with Right-Neighbor Deviation (RND) Pooling: A Focus on Multi-Class Brain Tumor Classification in MRI Images. *Biomedical Engineering: Applications, Basis and Communications*, 37(02), 2450046. **DOI:** 10.4015/S1016237224500467

- [11]. Andrews, C. J. Malathi, Anirudh Santhosh Kumar Narayanan, and **Adithya M. Sunil**. (2024). Compact metamaterial-based antenna for 5G applications. *Results in Engineering*, 24, 103269. **DOI:** 10.1016/j.rineng.2024.103269
- [12]. Kumaran, Y. S. S., **Kumar, S. P.**, & Sathya, P. (2024). Design and analysis of 2.45 GHz LNA at 60 nm CMOS technology for healthcare applications. *SSRG International Journal of Electrical and Electronics Engineering*, 11(10), 140–149. **DOI:** 10.14445/23488379/IJEEE-V11I10P114
- [13]. Gajula, R. B., Mahata, S., **Pingali, A.**, & Jindal, S. K. (2024). MEMS capacitive pressure sensor: analysis, theoretical modeling, simulation and performance comparison of the effect of a conical notch. *Engineering Research Express*, 6(4), 045337. **DOI:** 10.1088/2631-8695/ad8c9e
- [14]. Sanjay, S., **Soorya, S. N.**, Vengatesh, R., Prakasam, P., & Annamalai, P. (2024). Artificial Intelligence-Based Secured Smart Mirror Control Systems with Enhanced Vehicle and Signboard. *Advancement of Science and Technology: AI, Machine Learning, Electrical Engineering, and Computing Technologies*, 91. **DOI:** 10.1007/978-3-031-64151-0_7
- [15]. **Gupta, S.**, Rajalakshmi, S., Karthikeyan, A., Balaji, S., & Santhakumar, R. (2024). System performance evaluation of indoor visible light communication. *International Journal of Electrical and Electronics Research*, 12(4), 1293–1300. **DOI:**10.37391/ijeer.120422
- [16]. **Manikandan, S.**, Linkkesh, A. V., Patil, S. M., & Venkatesan, R. (2025). Performance Enhancement of Substrate Integrated Waveguide Antenna for Wi-Fi Applications. *Progress in Electromagnetics Research Letters*, 124, 9. **DOI:** 10.2528/PIERL24091702
- [17]. **Gupta, M.**, Gupta, S., Palanisamy, G., Nisha, J. S., Goutham, V., Kumar, S. A., ... & Naik, G. R. (2024). A comprehensive survey on detection of ocular and non-ocular diseases using color fundus images. *IEEE Access*, 12, 194296-194321. **DOI:** 10.1109/ACCESS.2024.3517700
- [18]. Chakraborty, A., Kumar, V. P. A., **Vruddhula, A. K.**, & Naidu, J. (2025). Energy efficient approximate multiplier for image processing applications. *Results in Engineering*, 25, 103798. **DOI:** 10.1016/j.rineng.2024.103798
- [19]. Varma, V. J., Jana, A., **Samal, A. K.**, S, A., Naidu, R. C., Al-Maadeed, S., ... & Khoodeeram, R. (2025). Enhancing dysarthria severity classification: efficient audio based deep learning models. *Discover Applied Sciences*, 7(8), 886. **DOI:** 10.1007/s42452-025-07260-2
- [20]. **Mishra, P.**, Mishra, N., Choudhary, D. K., Pareek, P., & Reis, M. J. (2025). Use of IoT with deep learning for classification of environment sounds and detection of gases. *Computers*, 14(2), 33. **DOI:** 10.3390/computers14020033

List of Conference Publication

- [1] . Shanmugan, S., Anbarasi, M., Agrawal, A., Sharan, N. N., Sharma, T., & **Singh, H.** (2024, December). Triple Layer Cyber Security Model for Anomaly Detection. In *2024 5th International Conference on Communication, Computing & Industry 6.0 (C2I6)* (pp. 1-6). IEEE. **DOI:** 10.1109/C2I663243.2024.10895589
- [2] . Majumdar, S., Talluri, S., **Srinivas, N.**, Ghosh, B., Sagar, P. R., & Shah, A. H. (2024, April). A Miniaturized Metamaterial based Pentagonal Patch Antenna for Multiband Applications. In *2024 10th International Conference on Communication and Signal Processing (ICCSP)* (pp. 1449-1453). IEEE. **DOI:** 10.1109/ICCSP60870.2024.10543875
- [3] . **Sribhavisha, K. B.**, Manasa, D., Prakash, D. R., Narayanan, S. A., Mohanty, A., & Sumathi, G. (2024, May). A novel on quality check of beverages using IoT. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-5). IEEE. **DOI:** 10.1109/AllIoT58432.2024.10574767
- [4] . Sharma, P., Pandkar, M., & **Nambiar, S.** (2024, May). Wireless greenhouse monitoring using ESP32 and sensor array for sustainable crop production. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-6). IEEE. **DOI:** 10.1109/AllIoT58432.2024.10574742
- [5] . Mohanasundaram, R., Sagar, R. K., Khandelwal, A., Upadhyay, D., **Poddar, H.**, & Rajagopal, S. (2024, May). Water quality monitoring and control in urban areas in real-time via IoT and mobile applications. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-5). IEEE. **DOI:** 10.1109/AllIoT58432.2024.10574594
- [6] . Shukla, V., **Sarkar, A.**, & Mohanty, A. (2024, May). Machine Learning-Based Fetal Assessment: A Non-Intrusive Approach. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-6). IEEE. **DOI:** 10.1109/AllIoT58432.2024.10574555
- [7] . Chandra, A., Kadam, A. S., Jain, P., **Kumawat, M.**, Patil, H. Y., & Gawas, M. A. (2024, May). Breast cancer classification using metaheuristic optimization and machine learning. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-4). IEEE. **DOI:** 10.1109/AllIoT58432.2024.10574626
- [8] . Chandra, A., **Harish, S. S.**, Kumar, R., Patil, H. Y., & Kumar, K. (2024, May). A Squared Shaped Ring Loaded with Improved Radiation 2-Element Waveguide Array for Radar Applications. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-4). IEEE. **DOI:** 10.1109/AllIoT58432.2024.10574653
- [9] . Deshpande, A., **Deshpande, P.**, & Padmini, T. N. (2024, May). Smart Aquaponics: Water Quality Monitoring and Cloud Based Alert. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-6). IEEE. **DOI:** 10.1109/AllIoT58432.2024.10574727
- [10] . **Vardhan, M. V.**, & Jaffino, G. (2024, May). Stock price prediction using machine learning. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-5). IEEE. **DOI:** 10.1109/AllIoT61742.2024.10587216

- [11] . **Nampoothiri, K.**, Maheshwari, K. U., Sundar, S., & Padmini, T. N. (2024, May). Fire spread analysis and fire detection using CNN. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-6). IEEE. DOI: 10.1109/AllIoT58432.2024.10574694
- [12] . Chowdhury, S., **Roy, S.**, Chowdhury, D. G., Chakraborty, S., Jain, K. P., & Bhattacharyya, B. (2024, May). SKIDS: An Object Classification and Smart Communication based Waste Bin. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-6). IEEE. DOI: 10.1109/AllIoT58432.2024.10574647
- [13] . **Mishra, P.**, Mukundan, A., & Mishra, N. (2024, June). Metamaterial Based Wideband Polarization Insensitive Electromagnetic Absorber for Distinct Microwave Applications. In *2024 IEEE Students Conference on Engineering and Systems (SCES)* (pp. 1-6). IEEE. DOI: 10.1109/SCES61914.2024.10652269
- [14] . **Agarwal, A.**, Thimmigari, T., & Mohanty, A. (2024, July). One Stop Disease Prediction System. In *2024 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT)* (pp. 1-5). IEEE. DOI: 10.1109/CONECCT62155.2024.10677328
- [15] . **Chowdhury, S.**, Roy, S., John, M., Chathurvedi, V. R. C., Das, D., & Mohanty, A. (2024, August). Novel Ensemble Sentiment Classification through Speech Processing and Stacking Generalization. In *2024 First International Conference on Electronics, Communication and Signal Processing (ICECSP)* (pp. 1-6). IEEE. DOI: 10.1109/ICECSP61809.2024.10698242
- [16] . Dash, D., Poddar, H., & **Chauhan, M.** (2023, December). Designing of Power-Efficient CMOS Based Digital Decoder: An Architectural Variations and Comparative Insights. In *2023 International Conference on Next Generation Electronics (NEleX)* (pp. 1-4). IEEE. DOI: 10.1109/NEleX59773.2023.10421102
- [17] . Das, T. K., Mallick, M. A. W., **Vasireddy, H.**, Agarwal, D., Laghate, A., & Singh, H. (2024, May). Design of a Fractal-inspired Monopole Antenna for S-band, IoT, and RFID Applications. In *2024 3rd International Conference on Artificial Intelligence For Internet of Things (AllIoT)* (pp. 1-4). IEEE. DOI:10.1109/AllIoT58432.2024.10574736
- [18] . **Chitale, A. M.**, Cherian, A. M., & Singh, A. (2024, July). Implementing the Chess Engine using NNUE with Nega-Max Algorithm. In *2024 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT)* (pp. 1-6). IEEE. DOI:10.1109/CONECCT62155.2024.10677087
- [19] . Chandra, A., Aswath, S., Kishore, N., & **Varun, V.** (2024, August). Dual polarized CPW-fed multi-band antenna for 5G, ISM, and X-band applications. In *2024 Control Instrumentation System Conference (CISCON)* (pp. 1-6). IEEE. DOI: 10.1109/CISCON62171.2024.10696816
- [20] . Das, T. K., Kuldeep, Y., Singh, P., Ramji, P., **Prasad, A.**, & Iyer, S. R. (2024, August). Design of a wideband slotted monopole antenna for c-band and rfid applications. In *2024 Control Instrumentation System Conference (CISCON)* (pp. 1-5). IEEE. DOI: 10.1109/CISCON62171.2024.10696233

- [21] . Kittur, H. M., Korantak, A., & **Kumar, A.** (2024, September). An Adaptive Multi-Objective Optimization on CMOS Two Stage Op-Amp Circuit Synthesis. In *2024 28th International Symposium on VLSI Design and Test (VDATE)* (p. 4). DOI: 10.1109/VDATE63601.2024.10705701
- [22] . Dodda, S. A., **Reddy, J.**, & Patwari, A. (2024, October). An Embedded Hardware Prototype for Fish Farm Monitoring. In *2024 8th International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC)* (pp. 381-386). IEEE. DOI:10.1109/I-SMAC61858.2024.10714678
- [23] . Madhav, A. B. S., Reddy, B. K., **Pillai, A. B.**, & Sagar, P. (2024, September). IoT-powered farmland monitoring system with voice integration. In *2024 5th international conference on smart electronics and communication (ICOSEC)* (pp. 845-850). IEEE. DOI:10.1109/ICOSEC61587.2024.10722557
- [24] . **Sreenivasan, S.**, Rout, A., Pal, T. K., & Ramachandran, P. (2024, September). Enhancing Phishing Detection Through Advanced Machine Learning Techniques. In *2024 5th International Conference on Smart Electronics and Communication (ICOSEC)* (pp. 1675-1681). IEEE. DOI: 10.1109/ICOSEC61587.2024.10722338
- [25] . Singh, A., Philip, R., Thomas, S. B., & **Mishra, T.** (2024, June). Comprehensive Analysis of Radar Signal Processing Techniques for Target Detection and Range Estimation Using MATLAB. In *2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT)* (pp. 1-5). IEEE. DOI: 10.1109/ICCCNT61001.2024.10724608
- [26] . Singh, A., Dubey, A., Jayant, V., **Raut, V. S.**, Rai, H., & Choudhary, D. K. (2024, October). Evaluation of integrated smoke detection and fire prevention systems using cisco packet tracer. In *2024 5th International Conference on Circuits, Control, Communication and Computing (I4C)* (pp. 470-474). IEEE. DOI: 10.1109/I4C62240.2024.10748484
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