Dr.Rajeev Rajan
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Department of Electronics and Communication Engineering
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Education

- Ph.D., Department of Computer Science and Engineering, Indian Institute of Technology, Madras **(Audio Processing)**
- MTech (***Applied Electronics and Instrumentation*****),** University of Kerala, College of Engineering, Trivandrum, 2004.
- B.Tech **(*Electronics and Communication*),** CUSAT, College of Engineering, Adoor, 2000.
- M.B.A **(Operations, Management),** IGNOU

Employment History

- Professor in Government Engineering College, Idukki (Sep 2022-till date)
- Professor and Head, Government Engineering College, Trivandrum (June 2022-Aug 2022)
- Associate Professor in Government Engineering College, Trivandrum (2022-2024)
- Associate Professor in College of Engineering, Trivandrum (2018-2022)
- Assistant Professor in Electronics and Communication Engineering, Rajiv Gandhi Institute of Technology, Kottayam (2014-2018)
- Assistant Professor in Electronics and Communication Engineering, Government Engineering College, Wayanad, Kerala. (2013-2014).
- Deputation for higher studies to Indian Institute of Technology, Madras -Ph.D (2010-2013)
- Assistant Professor in Electronics and Communication Engineering, Government Engineering College, Wayanad, Kerala. (2005-2010).
- Senior Research Fellow and Radiological Safety Officer, Fluid Control Research Institute (Under the Ministry of Heavy Industries, Government of India), Palakkad, Kerala (2004-2005)

Research Interests/Thrust Area

- Audio, Speech and Music Signal Processing
- Hearing
- Image Processing
- Natural Language Processing

Projects Completed/Ongoing

- AI-based Diabetic Retinopathy Grading Using Deep Learning Techniques Funded by TPLC(Completed)
- Design and Development of needle introducer -Joint Research Project-SCIT and GEC BH (ongoing)
- Design and Development of e-Trolly - Joint Research Project-SCIT and GEC BH(Completed)
- Design and Development of Organ-on-Chip - Joint Research Project-SCIT and GEC BH(ongoing)
- Design and Development of Real time Dam Water Management (ongoing)
- Design and Development of Land-Slide Anomaly Detection (ongoing)
- Design and Development of Phycoscrapper -Joint Research Project-CET and Catholicate College, Pathanamthitta (Completed)
- Surveillant Robot -Funded by KSCSTE-2022 (Completed)
- Music Information Retrieval using Melodic Similarity-TEQIP Funded (Completed)
- Non-destructive Classification of watermelon ripeness and maturity by acoustic analysis- TEQIP/371/2014 (Completed)
- Study on emotion recognition by fusion of features -TEQIP/372/2014 (Completed)

Patents Filed

- Phycoscraper, Device to study algae characteristics, 2022, No: 202241035059
- Adaptive Trolley E-Drive -Collaborative work with SCIT Trivandrum No202241035059
- Ultrasound Guided Needle Injector- Collaborative work with SCIT Trivandrum

MTech Projects.

1. Speech Emotion Recognition by fusion of slope and Teager energy features by Anvitha A.J submitted to Kannur University in 2014.
2. Non-destructive Classification using Acoustic Analysis by Reshma R.S submitted to Kannur University in 2014.
3. Modeling and Characterization of Non-linear Effects in Optical Amplifier for RoF

applications by Lekshmi, S.R. submitted to Kannur University in 2014. (Co-Guide).

4. Phase based Pitch Trajectory Estimation of multiple concurrent sounds by Boney Thomas, submitted to M.G University in 2015.
5. Vehicle detection Using Audio-Visual Cues by Piyush P. submitted to M.G University in 2015.
6. Medical Image Enhancement Using Anisotropic Diffusion with K-means clustering by Jitha Pinky Sreedhar submitted to M.G University in 2015.
7. Speech Emotion Recognition using Feature Fusion by Drisya P.S submitted to M.G University in 2016.
8. Speech/Music discrimination using spectral feature fusion by Sreekumar R. submitted to M.G University in 2016.
9. FPGA implementation of MFCC based music genre classification by Solomon Saju submitted to KTU in 2017.
10. Competency Evaluation of mimics and its effect on spoof attack by Unnikrishnan submitted to KTU in 2017.
11. Dialect Recognition in Malayalam Using Spectral Features by Sreeraj submitted to KTU in 2017.
12. Poetic Meter Estimation Using TMS320C6713 SDK by Soumaya, submitted to KTU in 2017.
13. Predominant-Instrument recognition in polyphonic music by Roshni Ajayakumar, submitted to KTU 2018.
14. Poetic meter estimation using Musical Texture Features by Anu Alphnosa Raju submitted to KTU 2018.
15. Musical Perception Analysis on Hearing Impaired People by Alka John, submitted to KTU 2018.
16. Predominant Instrument Recognition using CNN, by Lilly Louise, submitted to KTU 2019
17. Real time elevator Detection Using sensors in smart phone, Pooja Mohan submitted to KTU 2019.
18. Fault classification using Machine Learning Devi S. Thampy. Submitted to KTU 2019
19. Mimicking Recognition using LSTM, Diya U Pradeep Submitted to KTU 2020
20. Bird Call Classification Using DNN-Based Acoustic Modelling, Jisna Johnson, Submitted to KTU 2020
21. Structural segmentation of Folk music using deep learning, Nithin S.K 2021
22. Topic Modelling using Word Embedding and deep learning, (Co-guide) -Sahana 2021
23. Bird call recognition using Transfer Learning and augmentation, Noumida- 2021
24. Speech Recognition in Malayalam, Jasmin K.S 2021
25. Speech Emotion Recognition Using Attention Framework Hridya Raj T.V 2022,
26. Tonic Estimation in Indian Art Music Aiswarya M A 2022
27. Audio Mood Classification Using Attention and Multimodal Fusion, Sujesha A. S 2022
28. Artificial Intelligence Guided Educational Tool for Automatic Story Generation from Keyword Godvin George, 2022
29. Music Genre classification Using Deep Learning, Abhinav Ajay 2023
30. Diabetic Retinopathy Grading Using AI, Haritha Lekssmi K T, 2023

PhD Awarded/Ongoing

- Lekshmi C R, 2023, Title: Predominant instrument recognition and separation in polyphonic music using deep learning framework.(Awarded)
- Amlu Anna Joshy, 2023, Title : Dysarthria severity classification and speech transcription using deep learning framework.(Awarded)
- Kavya Manohar, 2023, Title-Linguistic challenges in Malayalam speech recognition: Analysis and solutions. (Awarded)
- Noumida A- Bird call recognition (Ongoing).
- Mala J B- Speaker diarization. (Ongoing).
- Bhasi K C- Mimicking Speech Recognition (Ongoing).
- Ritzy R- Structural Health Monitoring (Ongoing).

Recognition and Achievements

- INTERSPEECH-2024 Chair Speech Type Classification at Kos, Greece
- P.T. Bhaskarapanicker Science Writing Fellowship for the year 2022 (Robotics and Machine Intelligence) -KSCSTE
- Best Paper Award- Kerala Science Congress 2023 (Category 13).
- Outstanding TA Award from IIT Madras.
- Anti-Spoofing challenge (**ASVspoof 2017**). Member of the team representing IIT Madras bagged **17th** position, out of **50** participating countries,
- First Rank MTech 2004 Kerala University

Extension Activities

- Reviewer -Speech Communications, IEEE Transactions of Audio, speech and Language Processing, Imaging science Journal, JNMR, ICASSP, Interspeech.
- Technical Programme Committee Member and Reviewer, National Conference on Communication, organized by IITs in India
- Technical Committee Member, Maker Village, Technopark, Trivandrum
- Subject expert of the selection committee constituted for the selection of Technical Staff for **Digital University**
- Chairman Pass Board, ECE Third Year B. Tech of **Kerala University**
- Board of Studies Convenor (Robotics and Automation) **Kerala Technological University**
- Curriculum Committee Member, UG/PG Kerala **Technological University**
- CERD Staff in charge GEC BH
- IPR Cell Staff in charge GEC BH

Publications:

Journals: 31

1. Rajeev Rajan, Noumida A, Hridya Raj T. V. Oktoechos classification in liturgical music using self attention based-stacked bi-directional networks. Multimedia Tools Appl (2024). https://doi.org/10.1007/s11042-024-19706-7

2. Noumida A, Rajeev Rajan, Multi-Label Bird Species Classification Using Sequential Aggregation Strategy from Audio Recordings, Vol. 42 No. 5 (2023): Computing and Informatics

3. Nithin S. K. Rajeev Rajan, Folk music structural segment classification using GRU-based hierarchical attention network. *Sādhanā* 48, 254 (2023). https://doi.org/10.1007/s12046-023-02321-x
4. Hridya Raj T.V, Rajeev Rajan, SENet-based speech emotion recognition using synthesis-style transfer data augmentation. Int J Speech Technol 26, 1017–1030 (2023). https://doi.org/10.1007/s10772-023-10071-8
5. Sujesha A.S, Mala J B, Rajeev Rajan, Automatic music mood classification using multi-modal attention framework. Eng. Appl. Artif. Intell. 128, C (Feb 2024). https://doi.org/10.1016/j.engappai.2023.107355.
6. Rajeev Rajan, Aiswarya M. A, Tonic Pitch Estimation in Turkish Music Using Modified Group Delay Processing. Circuits Syst Signal Process (2024). https://doi.org/10.1007/s00034-024-02759-2
7. Aiswarya M. A, Rajeev Rajan, A review on tonic estimation algorithms in indian art music. Multimed Tools Appl 83, 38443–38463 (2024).
8. Resna S, Rajeev Rajan, Comparative Study on Multi-voice Singing Synthesize Systems International Journal of Automation and Smart Technology, 13(1),2023
9. Kavya Manohar, Jayan A.R, Rajeev Rajan, Improving speech recognition systems for the morphologically complex Malayalam language using subword tokens for language modeling. J AUDIO SPEECH MUSIC PROC. 2023, 47 (2023). https://doi.org/10.1186/s13636-023-00313-7
10. Lekshmi C.R, Rajeev Rajan, Predominant audio source separation in polyphonic music. *J AUDIO SPEECH MUSIC PROC.* **2023**, 49 (2023). https://doi.org/10.1186/s13636-023-00316-4
11. Rajeev Rajan, Hema A. Murthy Two-pitch tracking in co-channel speech using modified group delay functions", ***Speech Communication,*** 89, 37-46.

12. Rajeev Rajan, M. Misra, Hema A. Murthy, Melody extraction from music using modified group delay functions" , ***International Journal of Speech Technology*** 20 (1), 185- 204.

13. A. A. Joshy and R. Rajan, "Automated Dysarthria Severity Classification: A Study on Acoustic Features and Deep Learning Techniques," in **IEEE Transactions on Neural Systems and Rehabilitation Engineering**, vol. 30, pp. 1147-1157, 2022, doi: 10.1109/TNSRE.2022.3169814.

14. K. Manohar, A. R. Jayan and R. Rajan, "Mlphon: A Multifunctional Grapheme-Phoneme Conversion Tool Using Finite State Transducers," in **IEEE Access**, vol. 10, pp. 97555-97575, 2022, doi: 10.1109/ACCESS.2022.3204403.

15. Reghunath, L.C., Rajan, R. Transformer-based ensemble method for multiple predominant instruments recognition in polyphonic music. *J AUDIO SPEECH MUSIC PROC.* **2022**, 11 (2022). https://doi.org/10.1186/s13636-022-00245-8

16. Amlu Anna Joshy, Rajeev Rajan, Dysarthria severity assessment using squeeze-and-

excitation networks, **Biomedical Signal Processing and Control**, Volume 82, 2023, 104606, ISSN 1746-8094,

17. Rajan, R., Sivan, S. Multi-channel CNN-Based Rāga Recognition in Carnatic Music Using Sequential Aggregation Strategy. ***Circuits Syst Signal Process*** (2023). https://doi.org/10.1007/s00034-023-02301-w

18. Resna, S., Rajan, R. Multi-Voice Singing Synthesis From Lyrics. *Circuits Syst Signal Process* **42**, 307–321 (2023). https://doi.org/10.1007/s00034-022-02122-3

19. S, J., Samuel, A.A. & Rajan, R. A study on conventional and syllable-based approaches for automatic speech recognition in Malayalam. *Sādhanā* **47**, 284 (2022). https://doi.org/10.1007/s12046-022-02058-z

20. Amlu Anna Joshy, Rajeev Rajan, Dysarthria severity classification using multi-head attention and multi-task learning, Speech Communication, Volume 147, 2023,Pages 1-11, ISSN 0167-6393,

21. Joseph, S., Rajan, R. Cycle GAN-Based Audio Source Separation Using Time–Frequency Masking. *Circuits Syst Signal Process* **42**, 1163–1180 (2023). https://doi.org/10.1007/s00034-022-02178-1

22. Rajan, R., Harishanker G., Athirasree C.A, & Haritha S.M. (2021). Music Genre Classification Using Timbral Feature Fusion on i-vector Framework. *INFOCOMP Journal of Computer Science*, *20*(2).

23. Lekshmi , C.R., Rajeev, R. Multiple Predominant Instruments Recognition in Polyphonic Music Using Spectro/Modgd-gram Fusion. *Circuits Syst Signal Process* (2023). https://doi.org/10.1007/s00034-022-02278-y

24. R Rajan, BSS Mohan , Distance Metric Learnt Kernel-Based Music Classification Using Timbral Descriptors - International Journal of Pattern Recognition and Artificial Intelligence, 2021

25. *Rajeev Rajan, Lekshmi Chandrika Reghunath, and Liju T. Varghese. 2022. POMET: a corpus for poetic meter classification. Lang. Resour. Eval. 56, 4 (Dec 2022), 1131–1152. https://doi.org/10.1007/s10579-022-09604-5*

26. A Noumida, Rajeev Rajan, Multi-label bird species classification from audio recordings using attention framework, Applied Acoustics, Volume 197,2022, 108901, ISSN 0003-682X,

27. Sujeesha A.S, Rajeev Rajan," Transformer-based Automatic Music Mood Classification Using Multi-modal Framework", Journal of Computer Science and Technology, 2023.

28. Rajeev Rajan, Oktoechos Classification and Generation of Liturgical Music using Deep Learning Frameworks, Journal of Creative Music Systems.

29. Joseph, S., Rajan, R. Cycle GAN-Based Audio Source Separation Using Time–Frequency Masking. Circuits Syst Signal Process 42, 1163–1180 (2023). https://doi.org/10.1007/s00034-022-02178-1

30. Rajeev Rajan, "Information Communication and Technology in Indian Agriculture Sector", "Vinjana Kairali, Pages 40-48, March 2022. (UGC-CARE Journal-Malayalam Article)
31. Rajeev Rajan, "Machine Learning, -A Study ", Vinjana Kairali, Pages 43-46, July 2022. (UGC-CARE Journal, Malayalam Article)

Conferences

1. Bhasi Chandran, Rajeev Rajan, MIMICz- An Audio Corpus for the Competency Evaluation of Voice Mimicking, 2024 Third International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT 2024).
2. Aparna S, Madhurema V. J, Nandana Nair, Parvathi Mohan and Rajeev Rajan AI-based Diabetic Retinopathy Grading Using Raspberry Pi. SPICES-2024.
3. Hisana et al. Deep learning-based Early Prediction of Epileptic Seizures Using EEG, RAICS -2024
4. Hiba Hameed, Beena Koshy and Rajeev Rajan, Estimation of Graph Parameters Using Graph Convolutional Neural Networks, RAICS -2024
5. Noumida A, Rajeev Rajan and Joshua Thomas, Detecting Multiple Overlapping Birds in Audio Recordings using Self Attention-based Wavelet Convolutional Neural Network, RAICS -2024.
6. Aparna S, Madhurema V.J, Nandana Nair, Parvathi Mohan and Rajeev Rajan, SENet-based Diabetic Retinopathy Classification Using Data Augmentation, RAICS 2024
7. Mala J B,Alex Raj S M, Rajeev Rajan, X-vector-based Speaker Diarization Using Bi-LSTM and Interim Voting-driven Post-processing, TSD-2024.
8. Ritzy R et al. A Revew on non-invasive Image -based Deep Learning Pardigms for Crack Detection, ICFCR-2024
9. Rajeev Rajan, Noumida A, Multi-label Bird Species Classification from Field Recordings using Mel_Graph-GCN Framework -INTERSPEECH-2024
10. Bhasi K.C, Rajeev Rajan,Attention-augmented x-vectors for the evaluation of mimicked speech using Sparse Autoencoder-LSTM framework, INTERSPEECH-2024.
11. Rajeev Rajan, Noumida A, Aparna S., Madhurema V. J, Nandana Nair, Parvathi Mohan

Diabetic Retinopathy Grading Using Multi-scale Residual Network with Grouped Channel Attention. EUSIPCO-2024
12. Ashwin P. Joby, Allen Mammen Abraham, Sona Philip, Tessa Ann Josy, Sinith M.S., Rajeev Rajan, Teaching Indian Classical Music using Web-based Interactive Platform and Real-Time Audio Analysis, EUSIPCO-2024
13. Rajeev Rajan, Ajay Mahadev A R, Arjun P, Noumida A,Teaching Speech Signal Processing Fundamentals in Undergraduate Class Using an Interactive GUI, EUSIPCO-2024.
14. Rajeev Rajan, Noumida A, Paraconsistent Feature Analysis For the Competency Evaluation of Voice Impersonation, ASRU-2023, Taiwan
15. M. Suresh, R. Rajan and J. Thomas, "Dysarthria Speech Disorder Classification Using Traditional and Deep Learning Models," 2023 Second International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT), Trichirappalli, India, 2023, pp. 01-06, doi: 10.1109/ICEEICT56924.2023.10157285
16. D. Skariah, R. Rajan and J. Thomas, "CycleGAN based Speech Enhancement Using Time Frequency Masking," 2023 Second International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT), Trichirappalli, India, 2023, pp. 1-6, doi: 10.1109/ICEEICT56924.2023.10157492.
17. A. Ajay and R. Rajan, "Music Genre Classification Using Attention-Based CNN-Feature Fusion Paradigm," AICERA, 2023 Annual International Conference on Emerging Research Areas: International Conference on Intelligent Systems (AICERA/ICIS), Kanjirapally, India, 2023, pp. 1-6,
18. H. T. K M et al., "Classification of Neurological Disorders from EEG using Deep Learning Frameworks," 2023 Annual International Conference on Emerging Research Areas: International Conference on Intelligent Systems (AICERA/ICIS), Kanjirapally, India, 2023, pp. 1-6,
19. Sreelekshmi MS. S, D. Jayaram, V. R. Ajith, J. Jacob Mathew and R. Rajan, "Speaker Diarization Using X-vectors-DNN Framework," INDICON-2023 2023 IEEE 20th India Council International Conference (INDICON), Hyderabad, India, 2023, pp. 317-321
20. R. Rajan and N. A, "Multi-label Bird Species Classification Using Transfer Learning," 2021 International Conference on Communication, Control and Information Sciences (ICCISc), Idukki, India, 2021, pp. 1-5, doi: 10.1109/ICCISc52257.2021.9484858.
21. Rajan, R., Johnson, J. & Abdul Kareem, N. Bird Call Classification Using DNN-Based Acoustic Modelling. *Circuits Syst Signal Process* **41**, 2669–2680 (2022). https://doi.org/10.1007/s00034-021-01896-2
22. K. Manohar, A. R. Jayan and R. Rajan, "Mlphon: A Multifunctional Grapheme-Phoneme Conversion Tool Using Finite State Transducers," in IEEE Access, vol. 10, pp. 97555-97575, 2022, doi: 10.1109/ACCESS.2022.3204403.
23. N. A. and R. Rajan, "Deep Learning-based Automatic Bird Species Identification from Isolated Recordings," 2021 8th International Conference on Smart Computing and Communications (ICSCC), Kochi, Kerala, India, 2021, pp. 252-256, doi: 10.1109/ICSCC51209.2021.9528234.
24. R. Rajan, J. Antony, R. A. Joseph, J. M. Thomas, C. D. H and A. C. V, "Audio-Mood Classification Using Acoustic-Textual Feature Fusion," 2021 Fourth International Conference on Microelectronics, Signals & Systems (ICMSS), Kollam, India, 2021, pp. 1-6, doi: 10.1109/ICMSS53060.2021.9673592.

25. A. Krishnan, A. Vincent, G. Jos and R. Rajan, "Multimodal Fusion for Segment Classification in Folk Music," 2021 IEEE 18th India Council International Conference (INDICON), Guwahati, India, 2021, pp. 1-7, doi: 10.1109/INDICON52576.2021.9691751.
26. R Rajan, AA Joshy, V Shiburaj Oktoechos classification in liturgical music using musical texture features- Proc. of 15th International Symposium on Computer 2021
27. A. A. Joshy, P. N. Parameswaran, S. R. Nair and R. Rajan, "Statistical Analysis of Speech Disorder Specific Features to Characterise Dysarthria Severity Level," ICASSP 2023 - 2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Rhodes Island, Greece, 2023, pp. 1-5, doi: 10.1109/ICASSP49357.2023.10095366.
28. M. A. Aiswarya, M. S. Sinith and R. Rajan, "Automatic Tonic Pitch Estimation in South Indian Classical Music using Frequency- ratio Method," 2023 International Conference on Intelligent Systems for Communication, IoT and Security (ICISCoIS), Coimbatore, India, 2023, pp. 527-532, doi: 10.1109/ICISCoIS56541.2023.10100503.
29. Mala J. B, Anisha A. S, Alex Raj S. M and R. Rajan, "Efficacy of ELECTRA-based Language Model in Sentiment Analysis," 2023 International Conference on Intelligent Systems for Communication, IoT and Security (ICISCoIS), Coimbatore, India, 2023, pp. 682-687, doi: 10.1109/ICISCoIS56541.2023.10100342.
30. K. Manohar, G. G. Menon, A. Abraham, R. Rajan and A. R. Jayan, "Automatic Recognition of Continuous Malayalam Speech using Pretrained Multilingual Transformers," 2023 International Conference on Intelligent Systems for Communication, IoT and Security (ICISCoIS), Coimbatore, India, 2023, pp. 671-675, doi: 10.1109/ICISCoIS56541.2023.10100598.
31. A. Noumida, R. Mukund, N. M. Nair and R. Rajan, "Multi-label Bird Species Classification Using Ensemble of Pre-trained Networks," 2023 International Conference on Intelligent Systems for Communication, IoT and Security (ICISCoIS), Coimbatore, India, 2023, pp. 644-649, doi: 10.1109/ICISCoIS56541.2023.10100519.
32. Noumida . A, R. Mukund, N. M. Nair and R. Rajan, "Stacked Res2Net-CBAM with Grouped Channel Attention for Multi-Label Bird Species Classification," 2023 31st European Signal Processing Conference (EUSIPCO), Helsinki, Finland, 2023, pp. 446-450
33. Kavya Manohar, Gokul G. Menon, Ashish Abraham, Rajeev Rajan, A. R. Jayan, "Automatic Recognition of Continuous Malayalam Speech using Pretrained Multilingual Transformers,",2023, ICISCOIS.
34. J. Saji, M. Chandran, M. Pillai, N. Suresh and R. Rajan, "English-to-Malayalam Machine Translation Framework using Transformers," 2022 IEEE 19th India Council International Conference (INDICON), Kochi, India, 2022, pp. 1-5, doi: 10.1109/INDICON56171.2022.10039859.
35. S. Nazar and R. Rajan, "Multi-label Comment Classification Using GloVe-RNN Framework," 2022 IEEE 19th India Council International Conference (INDICON), Kochi, India, 2022, pp. 1-4, doi: 10.1109/INDICON56171.2022.10040184.
36. N. A and R. Rajan, "Multi-label Bird Species Classification Using Hierarchical Attention Framework," 2022 IEEE 19th India Council International Conference (INDICON), Kochi, India, 2022, pp. 1-6, doi: 10.1109/INDICON56171.2022.10039791.

37. G. George and R. Rajan, "A FAISS-based Search for Story Generation," 2022 IEEE 19th India Council International Conference (INDICON), Kochi, India, 2022, pp. 1-6, doi: 10.1109/INDICON56171.2022.10039758.
38. A. Ayasi, J. Joshy and R. Rajan, "Speaker Diarization Using BiLSTM and BiGRU with Self-Attention," 2022 Second International Conference on Next Generation Intelligent Systems (ICNGIS), Kottayam, India, 2022, pp. 1-5, doi: 10.1109/ICNGIS54955.2022.10079831.
39. Rajan, Rajeev, and Ananya Ayasi. "Oktoechos Classification in Liturgical Music Using SBU-LSTM/GRU}}." *Proc. Interspeech 2022* (2022): 2403-2407.
40. S. Sreejith and R. Rajan, "Rāga Recognition in Indian Carnatic Music Using Transfer Learning," 2021 Fourth International Conference on Microelectronics, Signals & Systems (ICMSS), Kollam, India, 2021, pp. 1-5, doi: 10.1109/ICMSS53060.2021.9673599.

41. Rajeev Rajan, Anna J. Joseph, Elizabeth K. Robin, Fathima Nishma T. K. "Part-Of-Speech Tagger in Malayalam Using Bi-directional LSTM", in proceedings of International Committee for the Co-ordination and Standardization of Speech Databases and Assessment Techniques(O-COCOSDA 2020.) Yangon,Myanamar, November 2020.
42. Rajeev Rajan, AbhijithGirish, Adharsh Sabu, AkshayPrasannanLatha, "Evaluation of Voice Mimicking Using i-vectorFramework", in Proceedings of the International Conference on Speech and Computer, SPECOM-2020,October 2020, St.Petersberg, Russia.
43. Abhijith G., Adarsh S., AkshayPrasannan and Rajeev Rajan, "Competency Evaluation in Voice Mimicking Using Acoustic Cues", in ProceedingsINTERSPEECH 2020.
44. Rajeev Rajan, AiswaryaVinodh Kumar, Ben P. Babu, "Poetic Meter Classification Using i-vector-MTF Fusion", in Proceedings INTERSPEECH 2020.
45. Amlu Anna Joshy, Rajeev Rajan "Automated Dysarthria Severity Classification Using Deep Learning Frameworks", in Proceedings of 28th European Signal Processing Conference (EUSIPCO 2020)
46. Kavya Manohar, Jayan A.R, Rajeev Rajan, Quantitative Analysis of the Morphological Complexity of Malayalam Language, in Proceedings of Text Speech Dialogue (TSD) - 2020.
47. Roshni Ajayakumar, Rajeev Rajan, "Predominant Instrument Recognition in Polyphonic Music Using GMM-DNN Framework" in Proceedings of IEEE conference on Signal Processing and Communication (SPCOM), Indian Institute of Science, Bangalore.
48. Rajeev Rajan, Haritha U.G, Sujitha A.C, Rejisha T.M, "Design and Development of a Multi-lingual Speech Corpora (TaMaR-EmoDB) for Emotion Analysis", in Proc. of INTERSPEECH 2019, Graz,Austria, Sep 15-19.
49. Rajeev Rajan, Anu Alphonsa Raju,"Deep Neural Network Based Poetic MeterClassification Using Musical Texture Feature Fusion", in Proc. of EUSIPCO-2019, A-Coruna, Spain,Sep 2-6,2019
50. Rajeev Rajan, Anu Alphonsa Raju, "Poetic Meter Classification Using Acoustic Cues", in Proc. of IEEE conference on Signal Processing and Communication (SPCOM-2018), Indian Institute of Science, Bangaluru, July 2018.
51. R Ajayakumar, R Rajan "Predominant instrument recognition from polyphonic music using feature fusion" in Proceedings of Emerging Trends in Engineering, Science and Technology for Society, Energy and Environment,(ICETEST)2018.

52. R. Rajan, R. S Reshma “Non-destructive classification of watermelon ripeness using acoustic cues”, in Proceedings of Emerging Trends in Engineering, Science and Technology for Society, Energy and Environment,(ICETEST)2018
53. Alka John, Rajeev Rajan, Karun Sajeev “Music Perception Analysis on Hearing Impaired Listeners”, in Proceedings of International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET), 2018
54. Jerin Baby Mathew ;Jonie Jacob ; Karun Sajeev ; Jithin Joy ; Rajeev Rajan, “Significance of Feature Selection for Acoustic Modeling in Dysarthric Speech Recognition”, in Proceedings of International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET), 2018.

55. Rajeev Rajan, Hema A. Murthy “Music genre classification by fusion of modified group delay and melodic features”, in Proc. of IEEE Twenty-third National Conference on Communications (NCC), Indian Institute of Technology, Madras, March 2017.

56. M.V Unnikrishnan, Rajeev Rajan“ Mimicking voice recognition using MFCC-GMM framework”, in Proceedings of International Conference on Trends in Electronics and Informatics (ICEI), 2017.

57. Solomon Saju, Rajeev Rajan, AR Jayan “Music genre classification using spartan 6 FPGA and TMS320c6713 DSK” in Proceedings of International Conference on Signal Processing and Communication (ICSPC) 2017.

58. S Soumya, Solomon Saju, Rajeev Rajan, Nelsa Sebastian“Poetic meter classification using TMS320C6713 DSK”, in Proceedings of International Conference on Signal Processing and Communication (ICSPC) 2017.

59. V.V.Sreeraj, Rajeev Rajan ,”Automatic dialect recognition using feature fusion”, in Proceedings of International Conference on Trends in Electronics and Informatics (ICEI), 2017.
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