LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(AUTONOMOUS)
Accredited by NAAC with'A' Grade & NBA (Under Tier - I), ISO 9001:2015 Certified Institution
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DEPARTMENT OF COMPUTER SCIENCE &ENGINEERING

Speech Analytics and Natural Language Processing Research Group

INTRODUCTION:

The **Speech Analytics and Natural Language Processing (NLP) Research Group** in the **Department of Computer Science and Engineering** at **Lakireddy Bali Reddy College of Engineering** is focused on advancing research in the fields of speech recognition, voice analysis, and human-computer interaction through language technologies. The group explores key areas such as automatic speech recognition (ASR), sentiment analysis, machine translation, and conversational AI systems. With access to modern tools and technologies, the group empowers both students and faculty to develop innovative solutions for real-world challenges in voice and text processing.

Under the guidance of experienced faculty members, the group is committed to fostering research excellence by encouraging the development of cutting-edge NLP algorithms and speech analytics models. Regular workshops, guest lectures, and faculty development programs (FDPs) are organized to help researchers stay abreast of the latest technological advancements. Additionally, the group supports the submission of research work to reputed journals and conferences, while promoting a strong collaboration culture between academia and industry.

Objectives of the Speech Analytics and NLP Research Group

1. **To design and develop advanced algorithms** for speech recognition, natural language understanding, and sentiment analysis for various applications.
2. **To organize colloquiums, workshops, and seminars** aimed at enhancing knowledge in speech analytics and NLP for faculty and students.
3. **To collaborate with industry experts and academic institutions** to stay updated on the latest technologies and trends in speech and language processing.
4. **To leverage available research infrastructure and resources** to produce high-quality publications in leading journals and conferences.
5. **To apply for research funding** from agencies like AICTE, UGC, and DST for speech and NLP-related projects.
6. **To encourage students and faculty** to engage in innovative research and submit papers to reputed SCIE, Scopus, and UGC-listed journals.
7. **To improve the quality of B.Tech projects** by incorporating speech analytics and NLP techniques in real-world applications.

Members of Speech Analytics and Natural Language Processing Research Group:

S.NO	Name of the Member	Designation
1.	Dr. P. Bhagath	Coordinator
2.	Dr. J. Nageswara Rao	Members
3.	Dr. P. Ashok Reddy	
4.	Dr. K. Devi Priya	
5.	Mr. S. Srinivasa Reddy	
6.	Mr. MD. Amanatulla	
7.	Mrs. G.V.Rajya Lakshmi	
8.	Mr.R.Ashok	
9.	Mr.P.Naga Babu	
10.	Mr. P. Veera Swamy	
11.	Mr.M. Kiran Kumar	
12.	Mr. Anand Thota	
13.	Mrs. P.Mary Kamala Kumari	
14.	Mrs. B. Nirosha	
15.	Mr. Y Babu	
16.	Mrs.K.Eswaree Devi	

JOURNALS

1. **"Evaluating the Performance of Vascular Feature Extraction Boosting Algorithm for Peripheral Arterial Disease Detection", B. Siva Rama Krishna,** Ch. N. Santhosh Kumar, B.V. Subba Rao, V. Rama Krishna, Rajendra Kumar G, and **J. Nageswara Rao,** International Journal of Pattern Recognition and Artificial Intelligence(Q3), Nov-24, ISSN (print): 0218-0014 | ISSN (online): 1793-6381.
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2. **"Hindi spoken digit analysis for native and non-native speakers ", P. Bhagath,** M Shanmukha, Pradip K Das, IAES International Journal of Artificial Intelligence (IJ-AI), Volume:14, Issue:02, Pg.No: 1561-1567, Date:17/2/2025, E-ISSN: 2089-4872/2252-8938.
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3. **"Investigating the Impact of Maternal Characteristics and Smoking on Birth Weight: An Ensemble Regression Analysis" K Devi Priya,** A Krishna Veni, Manjula Devarakonda Venkata, G Muni Nagamani, Velchuri Balaji, N V Ramya Devi Kotla" , Nanotechnology Perceptions - Raising Awareness of Nanotechnology, (Q4, impact fact: 0.11), Sep 26, 2024, Vol.20, S12 (2024), ISSN:1660-6795.
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4. **"Efficient Algorithms for Vehicle Plate Detection in Dynamic Environments", M. Kiran Kumar,** Rajeev K, Dr. C. Sushama, Dr. M. Sunil Kumar, P. Neelima, Dr. D. Ganesh **,** Communications on Applied Nonlinear Analysis, Vol 32, ISSUE No. 1s (2025), PG.NO: 273-289, 07-12-2024, ISSN: 1074-133X.
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6. **"Enhanced Medicinal Plant Classification Using Convolutional Neural Networks",** Sri Lakshmi T, Y Ayyappa, V Aruna, D Radha Rani, **P Mary Kamala Kumari**, S. Phani Praveen, International Journal of Advancement in Life Sciences Research, Volume 7(4) 87-97, 17th September 2024, ISSN: 2581-4877.
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Scopus Conference Proceedings

1. **"Automated Glaucoma Detection from Fundus Images using Deep Learning", J. Nageswara Rao;** G. Kusuma Priya; Shaik. Sadiya Tabassum; Shaik. Khaleel, 2024 3rd International Conference on Applied Artificial Intelligence and Computing (ICAAIC), Date of conference: Jul-24, "Electronic ISBN:979-8-3503-7519-0
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2. **"Smart Agriculture by Leveraging AI and IoT for Intelligent Insect Identification and Control", Ashok Reddyboina;** T Pavan Kumar; Saripineni Varshitha, M Naveen Reddy , 2024 IEEE International Conference on Information Technology Electronics and Intelligent Communication Systems (ICITEICS), 22-Aug, ISBN: 979-8-3503-8269-3/979-8-3503-8270-9.
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4. **"Precision-Driven Pneumonia Diagnosis: Integrating Adaptive Neuro-Fuzzy Inference System (ANFIS)", P. Veera Swamy,** U Asritha, K Ashok Babu, P Harsha Vardhan Reddy, International Conference on Computational Innovations and Emerging Trends(ICCIET-2024), Jul/24, Date of Conference: 4-5 April 2024, 2352-538X/2352-538X , 978-94-6463-471-6.
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5. **"Plant Disease Detection and Diagnosis", P. Nagababu**; Shaik. Nageena; Veeranki. Dharani; Darsi. Naveen, 2024 5th International Conference for Emerging Technology (INCET), Date of Conference: 24-26 May 2024, Date Added to IEEE Xplore: 26 July 2024, Conference Location: Belgaum, India, Electronic ISBN:979-8-3503-6115-5, ISBN:979-8-3503-6116-2.
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2. **"Blockchain-Enabled Electoral Process", K. Devi Priya,** Arvapalli Eswari, Kodali Karthik Sai, Mallavarapu Vivek, Proceedings of the International Conference on Computational Innovations and Emerging Trends (ICCIET- 2024)",Date of conference: 04th and 05th April 2024, 30 July 2024, ISBN:10.2991/978-94-6463-471-6_12, ISSN: 2352-538X. DOI: 10.2991/978-94-6463-471-6_12,
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