



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC with 'A' Grade & NBA (Under Tier - I), ISO 9001:2015 Certified Institution

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

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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	Mr. S. Srinivasa Reddy	
4	Mr. MD. Amanatulla	
5	Mr.M. Kiran Kumar	
6	Mr.R.Ashok	
7	Mr.P.Naga Babu	
8	Mr.P. Veera Swami	
10	Mrs. P.Mary Kamala Kumari	
11	Mrs.K.Eswaree Devi	

JOURNALS

1. "Telugu Spoken Digits Modeling using Convolutional Neural Networks," P. Bhagath, A. U. M. Rao, B. S. Ram and M. A. K. Reddy, 2023 IEEE 13th International Conference on Pattern Recognition Systems (ICPRS), Guayaquil, Ecuador, Aug-2023, pp. 1-7, 979-8-3503-3337-4 doi: 10.1109/ICPRS58416.2023.10178989.
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2. "Telugu Vakyalu: Spoken Telugu Sentences for IoT Applications", 2023 26th Conference of the Oriental COCOSDA International Committee for the Co-ordination and Standardisation of Speech Databases and Assessment Techniques (O-COCOSDA), P. Bhagath, V. Lasya, P. Dhyeya and P. K. Das, 02 April 2024, Location Delhi, India, **Electronic ISSN: 2472-7695, Print on Demand (PoD) ISSN: 2163-3479, DOI: 10.1109/O-COCOSDA60357.2023.10482996.**
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3. **Multimodal Medical Image Fusion and Classification Using Deep Learning Techniques'. Veeraiah, D., Sai Kumar, Ganiya, Rajendra Kumar, Rao, Katta Subba, Nageswara Rao, J, Manjith, Ramaswamy, Rajaram, Journal of Intelligent & Fuzzy Systems, Jan. 2024 : 1 – 15, ISSN NO:1875-8967**
<https://content.iospress.com/articles/journal-of-intelligent-and-fuzzy-systems/ifs240018>
4. "Efficient Communication in Wireless Sensor Networks Using Optimized Energy Efficient Engroove Leach Clustering Protocol", N. Meenakshi, Sultan Ahmad, A. V. Prabu, J. Nageswara Rao, Nashwan Adnan Othman, Hikmat A. M. Abdeljaber, R. Sekar, Jabeen Nazeer, Tsinghua Science and Technology, Vol:29, Feb-24, pg No.985-1001, ISSN:1007-0214.
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6. "Unicode-Powered Handwritten Telugu-to-English Character Recognition and Translation System using Deep Learning", B. V. Subba Rao, Katta Subba Rao, Venkata Nagaraju Thatha, Bandi Vamsi, J. Nageswara Rao, Rajendra Kumar Ganiya, International Journal of Intelligent Systems and Applications in Engineering, VOL. 12, Issue:10, Jan-2024, pg no. 515–525, ISSN:2147-6799.
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7. "Multilingual Web-based Agricultural Decision Support System: Integrating Machine Learning for Accurate Vegetable Price Prediction," J. Nageswara Rao, N.

Vineetha, D. Dinesh and D. K. Sree, 2024 International Conference on Inventive Computation Technologies (ICICT), Lalitpur, Nepal, 2024, 07 June 2024, pp. 1001-1007, doi:10.1109/ICICT60155.2024.10544612. <https://ieeexplore.ieee.org/document/10544612>

8. **"Neural Harvest : Advancements in Crop Yield Forecasting,"** S. R. Seelam, C. S. Thivari, B. Parabattina, N. K. G and S. K, 2024 International Conference on Inventive Computation Technologies (ICICT), Lalitpur, Nepal, 2024, pp. 914-918, doi: 10.1109/ICICT60155.2024.10544942. <https://ieeexplore.ieee.org/document/10544942>
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10. **"A Hybrid Model for Face Detection Using HAAR Cascade Classifier and Single Shot Multi-Box Detectors Based on Open CV"** Meriga Kiran Kumar, Venu Ratna Kumari G, Kishore K, Sreenivasulu Bolla, Sai Ram, Ramakrishna, Aravinda, International Research Journal of Multidisciplinary Scope, Vol.5(1), 650-660, ISSN:2582-631X, https://www.irjms.com/wp-content/uploads/2024/01/Manuscript_IRJMS_0304_WS.pdf
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