ACHARYA INSTITUTE OF TECHNOLOGY

NAAC ACCREDITED NBA

Value-Added Program (VAP) :
Bridging Text and Speech
Practical Foundations in NLP and Speech Processing

22nd to 26th September, 2025 | 09:00 AM to 04:30 PM

ECE Block Seminar Hall, Acharya Campus

INSTITUTION'S INNOVATION COUNCIL (Ministry of Education Initiative)

About the Program

This program is designed to provide participants with a strong foundation in Natural Language Processing (NLP) and Speech Processing, two rapidly growing domains in artificial intelligence. It focuses on practical applications such as text analysis, sentiment detection, speech recognition, and conversational AI. Through hands-on training, case studies, and tool-based learning, students will gain insights into how machines process human language and voice. The program aims to bridge theoretical concepts with real-world implementations, preparing learners for research and industry roles in AI-driven communication technologies.

Objectives of the Program

- Understand the fundamentals of Natural Language Processing (NLP) and Speech Processing, along with their real-world applications.
- Apply text preprocessing techniques (tokenization, stemming, lemmatization, stopword removal, POS tagging) using Python NLTK.
- Analyze text corpora using feature extraction methods such as Bag-of-Words, TF-IDF, and N-grams for building NLP models.
- Develop basic NLP applications such as sentiment analysis, named entity recognition, and text summarization.
- Explore the basics of speech signal representation, feature extraction (MFCCs, spectrograms), and speech-to-text processing.
- Integrate speech and text processing into simple real-world applications such as voice-based sentiment analysis or speech-driven chatbots.

Target Audience: 5th Semester AIML & CSE(DS) Students

Expected Outcomes of the Program

- Explain the concepts of NLP pipelines and speech processing workflows.
- Implement text preprocessing and corpus analysis using Python NLTK.
- Design and implement simple speech-to-text applications and integrate them with NLP models.

Committee Members

ADVISORY COMMITTEE	+

- Mr. Marigowda C K, Principal, AIT, Bangalore

CONVENER	+

- Dr. Vijayashekhar S.S, Associate Professor and Head, Dept. of Artificial Intelligence and Machine Learning, AIT.

EVENT COORDINATORS	+

- Dr. Kavitha Nair R, Dept. of AI & ML, AIT. ✉ kavitha_2294@achary.ac.in ☏ +91 99470 43923
- Mr. Jovin Deglus, Dept. of AI & ML, AIT. ✉ jovin2397@achary.ac.in ☏ +91 98460 96816

Resource Persons Details

Mr. Naveen Chandra
Designation: Founder and CEO, 3Q Sutantra, Bangalore

Dr. Mithun B N
Designation: Prof and Head, Dept of ISE, APS College of Engineering, Bangalore

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LOCATE US

Event Coordinator

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