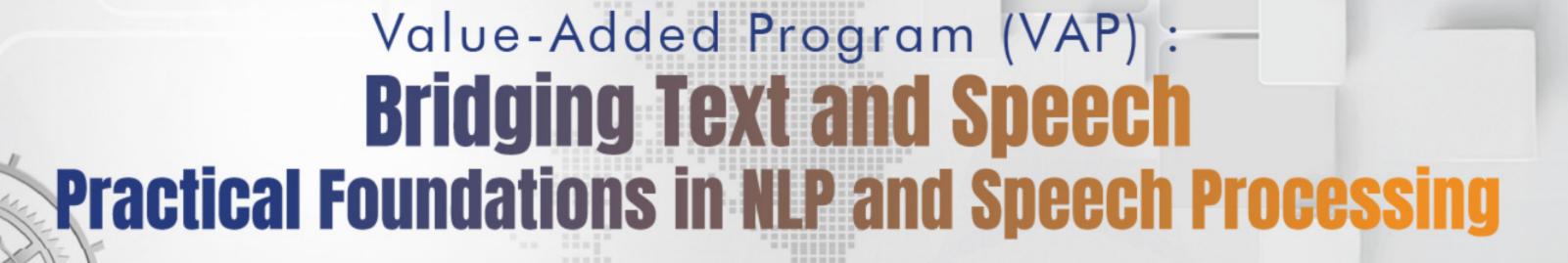


**ACHARYA** 

# **ACHARYA INSTITUTE OF TECHNOLOGY**







22<sup>nd</sup> to 26th September, 2025 | 09:00 AM to 04:30 PM ECE Block Seminar Hall, Acharya Campus



## **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 Al. 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 Al-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 Al & ML, AIT. \( \subseteq \text{ kavitha\_2294@achary.ac.in (\*) +91 99470 43923 } \) Mr. Jovin Deglus, Dept. of Al & 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

#### Acharya Institute of Technology

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LOCATE US

#### Event Coordinator

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