



Jansons Institute of Technology

Karumathampatti, Coimbatore - 641 659
Approved by AICTE and Affiliated to Anna University
An ISO 9001:2015 certified institution

Industry Readiness Course - Syllabus Department of Computer Science and Engineering Modern Advancements in ASR using MATLAB 2021 - 2022 EVEN Semester

Course Objectives:

- To understand the Introduction and review of speech recognition components.
- To be able to Design, executes, interpret and evaluate speech processing
- Understand how optimization techniques for speech processing.

Course Outcomes:

- Analyze the acoustic modelling, language modelling and its application.
- Create a Speaker Verification & its application
- Ability to Handle the build ASR and speaker verification system in Kaldi toolkit and MATLAB.

Syllabus:

Module 1 - Speech processing from basics to recent trends

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Speech processing from basics to recent trends - Design, executes, interpret and evaluate simple studies that utilize speech processing methods - Natural language processing: foundations to frontiers.

Module 2 - Intelligent optimization techniques for speech processing

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Intelligent optimization techniques for speech processing - Automatic speech recognition, acoustic modelling, language modelling and its application - Speaker Verification & its application.

Module 3 - Speech Data Analysis Methods

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Speech Data Analysis Methods - Deep learning techniques in ASR and Speaker Verification - Hands-on Session to build ASR and speaker verification system in Kaldi toolkit and MATLAB.

Course Designed By

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