

# Aditya Yadavalli

Final Year (B.Tech & MS)  
B.Tech in Computer Science  
M.S in Computational Linguistics  
at IIIT Hyderabad

301, Seshu Villa, Domalguda  
Hyderabad, Telangana-29, India

Mob.: +91-9177005542

Email: aditya.yadavalli@research.iiit.ac.in

## Profile

Github: [AdityaYadavalli1](#)  
LinkedIn: [LinkedIn Profile](#)

## Interests

Language Modelling  
Multilingual ASRs  
Natural Language Processing  
Deep Learning  
Speech and Language Disorders

## Skills

### TOOLS

Kaldi, ESPNet, Moses, Expo

### LANGUAGES

Python, C/C++, Javascript, Swift

## Teaching Experience

Speech Signal Processing  
Alt. Religious Studies

## Coursework

Deep Learning  
Statistical Methods in AI  
Compilers  
Natural Language Processing  
Natural Language Applications  
Speech Signal Processing

## Education

*2017-2022 (EXPECTED)*  
B.TECH. IN CS & M.S IN CL  
IIIT Hyderabad  
CGPA : 8.5/10 (9+ in last 4 sems)  
Awards: Deans List (Spring '20)

## Miscellaneous

### OTHER INTERESTS

Cricket, Understanding History

## Overview

I am a graduate research student working with Prof. Anil Kumar Vuppala in Speech Processing Lab at IIIT-H. I study Multilingual ASRs from a linguist's perspective with an aim to improve them.

## Problems I am Working On

### 2021 JUL - Phonotactics in Multilingual ASRs Phonology, ASR

- Do varying degree of phonotactics of different languages used to build multilingual ASRs affect the overall performance?
- Do the end2end models get affected by varying phonotactics of different languages differently than conventional HMM-based models?

### 2021 FEB - ASRs for morphologically rich languages Morphology, ASR

- Can subword-based multilingual ASRs work better for low-resource morphologically rich languages?
- Fairness in evaluating ASRs for morphologically rich languages

## Research Projects

### 2020 SUMMER - Bhahubhashak Speech to Speech MT

- Principal Investigators:  
Prof. Rajeev Sangal, Prof. Dipti Misra Sharma, Prof. Anil Vuppala
- Speech to Speech Machine Translation has three blocks:  
Speech Recognition, Machine Translation, Speech Synthesis
- My Focus: Automatic Speech Recognition for 6 Indic languages

### 2019 - 2020 MAY Performance of Broadcast Speeches MEITY

- Measured the performance of various available APIs
- Was part of the IIIT-H team that evaluated the performance of various existing ASR, MT and TTS systems

### 2020 Performance Evaluation of NMT and PBSMT systems ML, Moses

Compared various systems' performance for English to Telugu MT under the guidance of Prof. Manish Srivastava. Following were built as a part of this:

- Seq2Seq with different Attention mechanisms
- Phrase Based Machine Translation System using Moses
- Byte Pair Encoding & Morfessor to split agglutinative words in Telugu to boost the system's performance

## Publications

Nayan Anand Vats, Aditya Yadavalli, Krishna Gurugubelli, Anil Kumar Vuppala. **Acoustic Features, BERT Model And Their Complementary Nature For Alzheimer's Dementia Detection.** *Thirteenth International Conference on Contemporary Computing*, 5 August-7 August 2021, Noida, India