Aditya Yadavalli

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

126, OBH Block E, IIIT Hyderabad
Hyderabad, Telangana-32, India
Mob.: +91-917700xxxx
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
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