

# Ananya Kumar

Bengaluru, India

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## Education

Indian Institute of Science

Master of Technology in Computational Linguistics

Aug 2019 – Jul 2021 | Bengaluru, India

GPA: 9.7/10.0

Activities: Natural Language Processing Research Group, Speech Recognition Lab  
Assistant, Linguistics Society

Relevant Coursework: Speech Recognition, Speech Synthesis, Signal Processing,  
Phonetics, Acoustic Modeling, Language Modeling, Deep Learning for Speech

Bachelor's Degree: B.Tech. in Electronics and Communication Engineering, National  
Institute of Technology Surathkal, GPA: 9.3/10.0

## Work Experience

Speech Technologies Engineer | Amazon | Aug 2021 - Present | Bengaluru, India

- Developed Alexa voice recognition systems for Indian languages improving accuracy by 35% for diverse accents and dialects.
- Created neural text-to-speech models generating natural-sounding voices for 8 Indian languages.
- Implemented noise cancellation and acoustic adaptation algorithms enhancing speech recognition in challenging environments.
- Designed wake word detection system with 95% accuracy while maintaining low power consumption for embedded devices.

## Skills

Speech Recognition: Acoustic Modeling, Language Modeling, Noise Reduction, Feature Extraction, Forced Alignment

Speech Synthesis: Text-to-Speech, Prosody Modeling, Voice Cloning, Neural Vcoders, Parametric Synthesis

ML/DL for Speech: HMMs, RNNs, Transformers, CTC, Attention Mechanisms, wav2vec,

WaveNet, Tacotron

Audio Processing: Feature Extraction, Signal Processing, MFCC, Spectrograms, Voice Activity Detection

Languages/Tools: Python, C++, Kaldi, Mozilla DeepSpeech, ESPnet, Tensorflow, PyTorch

Evaluation: Word Error Rate, BLEU, MOS, PESQ, A/B Testing, Objective and Subjective Metrics

Other: Multilingual Systems, Low-resource Languages, Wake Word Detection, Voice Authentication, Speech Enhancement

## **Certificates**

Deep Learning for Speech Processing Specialization

Amazon Alexa Skills Development Certification

NVIDIA Deep Learning for Audio Processing

Advanced Signal Processing Certification

## **Awards**

Best Speech Technology Implementation – Indian AI Conference 2023

Innovation Award – Amazon Voice Technology Summit 2022

Outstanding Research Paper – International Speech Communication Association 2021