ANFENG XU

anfengxu@usc.edu ⋄ anfengxu136.github.io ⋄ 909-569-7380

EDUCATION

University of Southern California (USC) — Expected May 2026
Ph.D. in Electrical Engineering, Minor in Computer Science — GPA: 4.0/4.0
Signal Analysis and Interpretation Laboratory (SAIL), advised by Dr. Shrikanth Narayanan

University of California, San Diego (UCSD) — June 2021
B.S. in Electrical Engineering, Minor in Mathematics — Cumulative GPA: 3.97/4.0

RESEARCH INTERESTS

Speech and Audio Processing, Multi-modal AI, Deep Learning, AI for Healthcare

RECENT PROJECTS

Automated Child Language Assessment in Autism (USC - BU - Apple) — January 2022 - Present

Proposed annotation framework and modeling pipeline to directly predict language capabilities of children from audio.
Developed an audio-visual child-adult speaker classification method.
Currently building a frame-level child-adult speaker diarization model.
First-authored 2 conference publications.

AI Conversational Interactions (USC - Disney Research) — June 2022 - Present

Helped investigating methods to estimate WER and CTC loss for simulated speech data.
Collecting conversational dataset between a digital AI agent and multiple subjects.

Longitudinal Aging Study in India Diagnostic Assessment of Dementia (USC - AIIMS) Mar 2023 - Present

Developing methods for an automated multilingual language proficiency assessment pipeline for elderly people.

WORK EXPERIENCE

Signal Analysis and Interpretation Laboratory (SAIL) — August 2021 - Present
Ph.D. Research Assistant, Advisor: Dr. Shrikanth Narayanan — *USC*

Conduct research projects with the main focus on speech processing.
Lead the Autism project, mentor a MS student, and manage the IEMOCAP data distribution.

Jacobs School of Engineering — January 2020 - December 2020
Undergraduate Research Intern, Advisor: Dr. Tara Javidi — *UCSD*

Developed a new algorithm for a Quantitative Group Testing (QGT) problem.

Engineers for Exploration — January 2019 - September 2019
Undergraduate Research Intern, Advisor: Dr. Curt Schurgers — *UCSD*

Built an underwater depth sensor embedded system for Scripps Institute of Oceanography using C language.

PUBLICATIONS

A. Xu, K Huang, T Feng, H Tager-Feng, S Narayanan. Audio-visual child-adult speaker classification in dyadic interactions. Affective Computing and Intelligent Interaction (ICASSP, 2024).

D Bose, R Hebber, T Feng, K Somandepalli, **A Xu**, S Narayanan. MM-AU:Towards Multimodal understanding of advertisement videos (ACM MM, 2023).

A Xu, R Hebbar, R Lahiri, T Feng, L Butler, L Shen, H Tager-Flusberg, and S Narayanan. Understanding Spoken Language Development of Children with ASD Using Pre-trained Speech Embeddings (Interspeech, 2023).

AWARDS

ECE Ph.D. Screening Exam (USC, 2022): Ranked 1st for the Signals and Systems track.

Annenberg Fellowship (USC, 2021): Top-off fellowship selected among incoming Ph.D. students.

Summa Cum Laude (UCSD, 2021): GPA top $0 \sim 2\%$.