ANFENG XU

anfengxu@usc.edu ⋄ (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 Naryanan

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

RESEARCH PROJECTS

Automatd Child Language Assessment in Autism (USC - BU - Apple)　*January 2022 - Present*

Proposed annotation framework and modeling piepeline 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.
Authored 2 conference publications (1 under review).

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 2022 - Present*
Ph.D. Research Assistant, Advisor: Dr. Shrikanth Narayanan　　　　　　　　　*USC*

Conducting research projects with the main focus on speech processing.
Leading the Autism project, mentoring a MS student, and managing 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 2022*
Undergraduate Research Intern, Advisor: Dr. Curt Schurgers　　　　　　　　　*UCSD*

Developed 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 (under review for 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 $0 \sim 2\%$.