

# ANFENG XU

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## EDUCATION

### University of Southern California (USC)

Ph.D. in Electrical Engineering, Minor in Computer Science

Signal Analysis and Interpretation Laboratory (SAIL), advised by Dr. Shrikanth Narayanan

Expected May 2026

GPA: 4.0/4.0

### University of California, San Diego (UCSD)

B.S. in Electrical Engineering, Minor in Mathematics

June 2021

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.

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)

Ph.D. Research Assistant, Advisor: Dr. Shrikanth Narayanan

August 2022 - Present

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

Undergraduate Research Intern, Advisor: Dr. Tara Javidi

January 2020 - December 2020

UCSD

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

### Engineers for Exploration

Undergraduate Research Intern, Advisor: Dr. Curt Schurgers

January 2019 - September 2022

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 (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 ~ 2%.