

ANFENG XU

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EDUCATION

University of Southern California (USC) Ph.D. in Electrical Engineering, Minor in Computer Science	Expected May 2026 GPA: 4.0/4.0
University of Southern California (USC) M.S. in Electrical Engineering	May 2024 GPA: 4.0/4.0
University of California, San Diego (UCSD) B.S. in Electrical Engineering, Minor in Mathematics	June 2021 CGPA: 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) Proposed annotation framework and modeling pipeline to predict language capabilities of children directly from audio. Developed an audio-visual child-adult speaker classification method. Built a child-adult speaker diarization model. First-authored 3 conference publications.	January 2022 - Present
AI Conversational Interactions (USC - Disney Research) Helped investigating methods to estimate WER and CTC loss for simulated speech data. Collecting conversational dataset between a digital AI agent and multiple subjects.	June 2022 - Present
Longitudinal Aging Study in India Diagnostic Assessment of Dementia (USC - AIIMS) Developing methods for an automated multilingual language proficiency assessment pipeline for elderly people.	Mar 2023 - Present

WORK EXPERIENCE

Meta Reality Lab <i>Research Scientist Intern, Mentor: Dr. Biqiao Zhang</i> Conducted research for Keyword Spotting (KWS) in the Meta Speech AI team.	May 2024 - Aug 2024
Signal Analysis and Interpretation Laboratory (SAIL) <i>Ph.D. Research Assistant, Advisor: Dr. Shrikanth Narayanan</i> Conduct research projects with the main focus on speech processing. Lead the Autism project, mentor a MS student, and manage the IEMOCAP data distribution.	August 2021 - Present USC
Jacobs School of Engineering <i>Undergraduate Research Intern, Advisor: Dr. Tara Javidi</i> Developed a new algorithm for a Quantitative Group Testing (QGT) problem.	January 2020 - December 2020 UCSD
Engineers for Exploration <i>Undergraduate Research Intern, Advisor: Dr. Curt Schurgers</i> Built an underwater depth sensor embedded system for Scripps Institute of Oceanography using C language.	January 2019 - September 2019 UCSD

PUBLICATIONS

- A Xu**, T Feng, H Tager-Flusberg, C Lord, S Narayanan. Data Efficient Child-Adult Speaker Diarization with Simulated Conversations. (under review).
- A Xu**, B Zhang, S Kong, Y Huang, Z Yang, S Srivastava, M Sun. Effective Integration of KAN for Keyword Spotting. (under review).

T Feng, **A Xu**, X Shi, S Bishop[†], S Narayanan. Egocentric Speaker Classification in Child-Adult Dyadic Interactions: From Experimental Design to Computational Modeling. (under review).

A Xu, K Huang, T Feng, L Shen, H Tager-Feng, S Narayanan. Exploring Speech Foundation Models for Speaker Diarization in Child-Adult Dyadic Interactions. (Interspeech, 2024).

A Xu, K Huang, T Feng, H Tager-Feng, S Narayanan. Audio-visual child-adult speaker classification in dyadic interactions. (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).

LANGUAGES

English (fluent), Japanese (native), Mandarin Chinese (conversational)

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%.