Noah Khaloo

nkhaloo@ucsd.edu | 714-495-0287 | LinkedIn | GitHub: github.com/nkhaloo | Website: nkhaloo.github.io

EDUCATION

University of California, San Diego | San Diego, CA *Sep 2023–Present*
PhD, Linguistics

University of California, Irvine | Irvine, CA *Sep 2017–Jun 2021*
Bachelor of Arts, Psychology

WORK EXPERIENCE

Meta Reality Labs | Research Scientist Intern | Redmond, WA *Aug 2026–Present*

- **Speech & Audio Evaluation:** Develop evaluation pipelines to characterize speech and audio quality from wearable devices in noisy, real-world acoustic environments.
- **Benchmark Design:** Create datasets for evaluating enhanced speech and wearable-device audio across representative acoustic conditions.
- **Acoustic Analysis:** Analyze how noise suppression, speech enhancement, and target-speaker amplification preserve voice quality using acoustic features, DSP, and perceptual evaluation.

Loreo.ai | Machine Learning Engineer (Contract) | Remote *Jun–Aug 2026*

- **Model Evaluation:** Evaluated pretrained speaker-diarization models across languages, accents, and noise conditions for real-time transcription.
- **Benchmarking & Adaptation:** Built naturalistic speech benchmarks and reproducible evaluation pipelines; benchmarked GPU/CPU performance and developed ASR and diarization fine-tuning protocols.

OpenAI | AI Trainer (Contract) | Remote *Jun 2024–Oct 2025*

- **LLM Evaluation:** Designed research-style prompts in statistics, linguistics, and cognitive science; validated model outputs for accuracy, completeness, and clarity.
- **Evaluation Rubrics:** Developed research-backed rubrics to assess model performance across prompts.

PROJECT EXPERIENCE

Perceptual and Acoustic Correlates of Race in TTS *Interspeech 2026*

- **Social Perception of TTS:** Conducted a perceptual study of synthetic voices; found that listeners can perceive racial identity to some extent and associate social characteristics with those voices.
- **Acoustic Analysis:** Found modest acoustic separability between perceived racial categories; an XGBoost classifier achieved 65% accuracy with speaker-disjoint cross-validation.
- **Paper:** Khaloo, N., Holliday, N., & Creel, S. (2026). *Perceptual and Acoustic Correlates of Racial Identity in Text-to-Speech Voices.* pp. 4009–4013. DOI: 10.21437/Interspeech.2026-1479. [Code]

Evaluating Accent Conversion Models *ICPhS 2027*

- **Perceptual Evaluation:** Evaluated state-of-the-art models; found that some models better preserve speaker identity while others better transfer accent, but none succeeds at both.
- **Embedding Analysis:** Found that speaker embeddings favor voice identity over accent, limiting their usefulness for evaluating accent transfer. [Project] [Code]
- **Paper:** Submitted to the 21st International Congress of Phonetic Sciences (ICPhS 2027).

OPEN SOURCE TOOLS

- **VSPY:** Develop a Python package extracting perceptually motivated acoustic features from speech for voice quality analysis, TTS naturalness evaluation, and classification.
- **Variable Acoustic Organizer (VAO):** Develop a model that uses raw acoustic features to classify speech segments as sonorants, obstruents, or silence, supporting sound-specific acoustic analysis.

SKILLS

Programming: Python, PyTorch, R, C++, HTML, CSS, JavaScript
Specialties: Speech and audio evaluation, acoustic signal processing, voice AI, text-to-speech, human-computer interaction