

Trang Tran

Speech & natural language processing, prosody
Applications in health, education

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EXPERIENCE

Reality Defender, New York, NY 11/2023–present
Applied Scientist II – Audio

Develop and analyze models for audio deepfake detection [10,11]

Institute for Creative Technologies, Los Angeles, CA 12/2020–10/2023
Postdoctoral Researcher

Develop, evaluate, and analyze multimodal (text & speech) machine learning models for understanding dialog patterns in motivational interviews (MI) therapy sessions; focus on predicting MI intent codes, estimating empathy perception and correlation to behavioral outcomes, identifying salient features in MI to aid clinicians in diagnosis and therapist training [7,8,9]

University of Washington, Seattle, WA 06/2014–12/2020
Graduate Research Assistant in Speech and Natural Language Processing

- Developed models for integrating prosodic and acoustic features in spoken language tasks (parsing; dialog act recognition), analyzed the effects of speech styles and conditions (conversational vs. read, manual vs. ASR transcripts) [3,4,5,6]
- Analyzed disfluency patterns in children's speech, contributed to extending annotation system for children's speech transcript; studied acoustic models for prosodic patterns in language acquisition and learning [2]
- Developed style & topic models for characterizing language of reddit discussions; assessed the correlation between style vs. topic similarity with community endorsement, revealing higher correlation of style [1]

Liulishuo/LingoChamp (now LAIX), San Mateo, CA 06/2018–09/2018
Research Intern

Developed and evaluated seq2seq vs. transformer models to incorporate prosodic-acoustic information in parsing for second language learning; analyzed the differences of native vs. non-native speech effects on parsing [5]

Amazon Alexa Shopping, Seattle, WA 06/2017–08/2017
Applied Scientist Intern

Developed and evaluated ranking algorithms for selecting Amazon Choice items in recommendation; analyzed the utility of language features

Toyota Technological Institute, Chicago, IL 06/2016–09/2016
Visiting Graduate Intern

Developed and evaluated seq2seq architectures for constituency parsing of conversational speech, using transcripts and acoustic features [3]

Bucknell University, Lewisburg, PA 08/2012–05/2014
Graduate Research Assistant

Developed and evaluated filter- and inventory-based systems for voice conversion and speech enhancement

EDUCATION

University of Washington, Seattle, WA 06/2014–12/2020
PhD in Electrical Engineering
Thesis: Neural Models for Integrating Prosody in Spoken Language Understanding

Bucknell University, Lewisburg, PA 08/2012–05/2014
MS in Electrical Engineering
Thesis: Noise-Robust Voice Conversion

Bucknell University, Lewisburg, PA 08/2007–05/2012
BS in Electrical Engineering & BA in Economics

SKILLS

Computing: python (pytorch, sklearn), bash, MATLAB

Languages: Vietnamese (native), English (fluent), French (conversational)

HONORS & AWARDS

University of Washington Society of Women Engineers Outstanding Female Engineer Award, 2020

University of Washington Clairmont L. Egtvedt Endowed Engineering Fellowship, 2020

Bucknell University Fremont International Student Scholarship, 2007–2012

Honor Societies: Phi Beta Kappa, Tau Beta Pi

SERVICE & OUTREACH

Action Editor (area chair) for ACL Rolling Review, 2021 – present

Virtual Platform Co-chair ACII 2021

Academic Conference Reviewer

- Interspeech 2023 – present
- ICMI 2021 – present
- ACL 2020 – present
- EMNLP 2019 – present
- Transactions of Affective Computing 2022–2023

Interspeech Mentoring Committee
ISCA Student Advisory Committee, 2021 – present

Student Advisory Council
UW Electrical & Computer Engineering, 2019 – 2020

Research Mentor 1 PhD student, 2 Master's students 2020 – 2023; 3 Undergraduate (REU) student interns 2021 – 2023

REFERENCED PUBLICATIONS

- [11] [Zhu et al., ASVspoof 2024](#)
- [10] [Zhu et al., NeurIPS 2024](#)
- [9] [Tran et al., ICMI 2023](#)
- [8] [Tavabi et al., ACII 2023](#)
- [7] [Tavabi et al., CLPsych 2021](#)
- [6] [Tran & Ostendorf, Interspeech 2021](#)
- [5] [Tran et al., Interspeech 2019](#)
Best Student Paper Nominee
- [4] [Zayats et al., Interspeech 2019](#)
- [3] [Tran et al., NAACL 2018](#)
- [2] [Tran et al., Interspeech 2020](#)
- [1] [Tran & Ostendorf, EMNLP 2016](#)