

# Trang Tran

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

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## EXPERIENCE

**Institute for Creative Technologies, Los Angeles, CA** 12/2020–09/2023  
*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 [1,2]

**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 and dialog act recognition), analyzed the effects of varying speech styles and conditions (conversational vs. read speech, manual vs. ASR transcripts); demonstrated the utility of prosody in long and disfluent regions of speech [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 [7]
- 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 [8]

**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 [4]

**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 [6]

**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

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