Kexin Feng

(979)402-6018 • kexin@tamu.edu • https://kexinf.github.io/

Education

Texas A&M University

Ph.D., *Computer Science. Advisor: Theodora Chaspari* — Expected: 2024

BS, *Major in Computer Science, Minor in Cybersecurity* — 2020

Experience

Texas A&M University — College Station, TX

Graduate Research Assistant — May 2021 – Present

- Designing machine learning model driven by human knowledge (depression speech often has a reduced vowel space) to identify the depression from speech in clinical interviews; **National Science Foundation**
- Developing a vehicle defects identification system for General Motors Paint Shops using interpretable deep learning and user interface design; **General Motors**
- Analyzing social emotion change during COVID-19 quarantine using YouTube conversational vlogs and their connections with important social events; **Texas A&M Institute of data science**

Graduate Teaching Assistant — August 2020 – May 2021

- TA for CSCE 633 (machine learning), CSCE 221-Honor (data structures and algorithms), CSCE 433/627 (formal languages and automata / theory of computability)

Spark China Education — Virtual

Teaching Assistant — May 2020 – August 2020

- Outcome: "Sketch-Inspector: a Deep Mixture Model for High-Quality Sketch Generation of Cats" in International Symposium on Visual Computing (ISVC 2020). My name was mentioned in Acknowledgement section.

Research Interest

Speech processing, human behavioral analysis, affective computing, deep learning, transfer learning

Review Services

Conference: EMBC 2021, 2022

Journals: Neural Processing Letters (NEPL), IEEE Transactions on Instrumentation & Measurement (IEEE TIM), Intelligent Systems in Accounting, Finance and Management

Journal Publications

1. **K. Feng** and T. Chaspari, "Few-shot Learning in Emotion Recognition of Spontaneous Speech Using a Siamese Neural Network with Adaptive Sample Pair Formation," IEEE Transactions on Affective Computing (TAFFC), DOI: 10.1109/TAFFC.2021.3109485
2. M. Yadav, Md. Sakib, E. H. Nirjhar, **K. Feng**, A. Behzadan and T. Chaspari, "Exploring individual differences of public speaking anxiety in real-life and virtual presentations," IEEE Transactions on Affective Computing (TAFFC), DOI: 10.1109/TAFFC.2020.3048299
3. **K. Feng** and T. Chaspari, "A review of generalizable transfer learning in automatic emotion recognition," Frontiers in Computer Science, DOI: 10.3389/fcomp.2020.00009

Selected Conference Publications

1. **K. Feng**, J. B. Duong, K. Carta, S. Walters, G. Margolin, A. C. Timmons, T. Chaspari, "A Semi-supervised Few-shot Learning Approach With Domain Adaptation for Personalized Stress Detection Within Dating Couples," submitted to ICASSP 2023.
2. **K. Feng** and T. Chaspari, "Augmented Knowledge-Driven Speech-Based Method of Depression Detection Leveraging Vowel Information," submitted to ICASSP 2023.
3. **K. Feng** and T. Chaspari, "Toward Knowledge-Driven Speech-Based Models of Depression: Leveraging Spectrotemporal Variations in Speech Vowels," IEEE International Conference on Biomedical and Health Informatics (BHI 2022), Ioannina, Greece, September, 2022.
4. **K. Feng**, P. Zanwar, A. Behzadan, and T. Chaspari, "Exploring Speech Cues in Web-mined COVID-19 Conversational Vlogs," *ACM Multimedia-2020 workshop on Media Analytics for Societal Trends (MAST 2020)*, October 2020, DOI: 10.1145/3423268.3423584

5. **K. Feng** and T. Chaspari, "A Siamese neural network with modified distance loss for transfer learning in speech emotion recognition," *AAAI-2020 workshop on Affective Content Analysis (AffCon 2020), pp. 29-35,* New York, February 2020.
6. V. Narula, **K. Feng** and T. Chaspari, "Preserving privacy in image-based emotion recognition through user anonymization," *International Conference on Multimodal Interaction (ICMI 2020),* Utrecht, Netherlands, October 2020, DOI: 10.1145/3382507.3418833
7. M. Yadav, Md. Sakib, **K. Feng**, A. Behzadan and T. Chaspari, "Virtual reality interface and population-specific models to mitigate public speaking anxiety," *International Conference on Affective Computing and Intelligent Interaction (ACII 2019)*, Cambridge, United Kingdom, September 2019 (BEST PAPER NOMINATION), DOI: 10.1109/ACII.2019.8925509

Selected Class Projects

1. **Dieting detection using smart watch**
   - Used a Polar M600 smart watch collection heart rate, acceleration, and gyroscope data.
   - Explored the personalized model on detecting the eating behavior using collected data.
2. **Question generation using information retrieval**
   - Designed rule-based question generation method to switch topic when identifying negative emotions.
   - Utilized two public available datasets to achieve emotion recognition: (a) Sentiment104; (b) IMDB.