# Kexin Feng

(979)402-6018 • kexin@tamu.edu

## Education

**Texas A&M University**

Ph.D., *Computer Science. Advisor: Theodora Chaspari* — Expected: 2025

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.