

XIANG ZHANG

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RESEARCH INTERESTS

My research interests lie in the intersection of Computer Vision and Deep Learning. Specifically, I am passionate about exploring multi-modal learning for human facial analysis, and its applications in various domains such as healthcare, security, and entertainment. I am seeking a challenging role to utilize my skills, education, and experience to make a meaningful contribution to the field.

EDUCATION

Binghamton University, NY, USA

August 2019 - Present

Ph.D.Candidate in Computer Science; Advisor: Dr.Lijun Yin

Binghamton University, NY, USA

August 2017 - May 2019

Master in Computer science; Advisor: Dr.Lijun Yin

Nanchang Hangkong University, China

September 2008 - June 2012

Bachelor in Electronic Science and Technology

RESEARCH EXPERIENCES

Binghamton University GAIC Lab

February 2018 - Present

Data collection and creation

- Led the creation and curation of multi-modal human emotion databases, including video, audio, 3D, thermal, and physiological signals.
- Processed and organized the collected data for public release.

EEG based multi-modal research

- Collected and created a EEG-based multi-modal emotion database containing both posed and authentic emotions.
- Conducted experiments on both posed and spontaneous emotion recognition to evaluate the efficacy of the database.

Multi-modal learning research

- Conducted research on multi-modal learning using texture, thermal, 3D data, text and so on.
- Developed and evaluated multi-modal learning algorithms for AU recognition and facial expression recognition.
- Designed multi-modal fusion strategies and also multi-modal pre-training methods through self-supervised or weakly-supervised learning.

PUBLICATIONS

- [1] Xiaotian Li*, **Xiang Zhang***, Huiyuan Yang, Wenna Duan, Weiying Dai and Lijun Yin. *An EEG-Based Multi-Modal Emotion Database with Both Posed and Authentic Facial Actions for Emotion Analysis*. 2020 15th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2020) [PDF]
- [2] **Xiang Zhang** and Lijun Yin. *Multi-Modal Learning for AU Detection Based on Multi-Head Fused Transformers*. 2021 16th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2021) [[PDF]

- [3] **Xiang Zhang**, Huiyuan Yang, Taoyue Wang, Xiaotian Li and Lijun Yin. *Multimodal Learning with Channel-Mixing and Masked Autoencoder on Facial Action Unit Detection*. (arXiv 2022) [PDF]
- [4] **Xiang Zhang**, Taoyue Wang, Xiaotian Li, Huiyuan Yang and Lijun Yin. *Weakly-Supervised Text-driven Contrastive Learning for Facial Behavior Understanding*. (arXiv 2023) [PDF]

(* the contribution of the first two authors is equal)

WORK EXPERIENCE

JD.com, Inc.(NASDAQ 100), Beijing, China
iOS Developer

Feb 2014 - Jul 2017

- Responsible for the development and updating for multiple iOS applications in JD.com.
- Collaborated closely with colleagues to test and identify bugs in the applications, providing timely solutions and updates to ensure optimal user experience.

Yiwu Buy, Beijing, China
iOS Developer

Aug 2012 - Feb 2014

- Collaborated with product manager, UI designer, and server developer to develop an iOS application for Yiwu Buy, an online commercial company.
- Designed and implemented custom shopping features for the application to enhance the user experience on mobile devices.