

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

Binghamton, NY

PH.D. CANDIDATE IN COMPUTER SCIENCE;

Aug. 2017 - May 2019

- Advisor: Dr.Lijun Yin

Binghamton University

Binghamton, NY

MASTER OF SCIENCE IN COMPUTER SCIENCE, GPA: 3.81/4.0

Aug. 2017 - May 2019

- Advisor: Dr.Lijun Yin

Nanchang Hangkong University

Nanchang, China

BACHELOR IN ELECTRONIC SCIENCE AND TECHNOLOGY, GPA: 3.2/4.0

Sep. 2008 - June 2012

Research Experiences

Binghamton University GAIC Lab

Binghamton, NY

DATA COLLECTION AND CREATION

Feb. 2018 - Present

- 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

** denotes equal contribution*

- 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]
- **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]
- **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]
- **Xiang Zhang**, Taoyue Wang, Xiaotian Li, Huiyuan Yang and Lijun Yin. *Weakly-Supervised Text-driven Contrastive Learning for Facial Behavior Understanding*. (arXiv 2023)[PDF]

Experience

JD.com, Inc.

Beijing, China

IOS SOFTWARE ENGINEER

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 SOFTWARE ENGINEER

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.