Xiang Zhang

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Research Interests

My research interests are focused on the intersection of Computer Vision and Deep Learning, specifically exploring multi-modal learning for human facial analysis, and its applications in various domains such as healthcare, security, education, and entertainment.

Recently, Vision-Language pre-training, and AIGC also caught my interest. I am also interested in exploring multi-modal learning for other topics such as image/video recognition and generation.

I am seeking an internship role where I can 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. 2019 - Present*

- 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*

Publications

** denotes equal contribution*

- **Xiang Zhang**, Huiyuan Yang, Taoyue Wang, Xiaotian Li and Lijun Yin.*Multimodal Channel-Mixing: Channel and Spatial Masked AutoEncoder on Facial Action Unit Detection*. [WACV 2024]
- **Xiang Zhang**, Taoyue Wang, Xiaotian Li, Huiyuan Yang and Lijun Yin.*Weakly-Supervised Text-driven Contrastive Learning for Facial Behavior Understanding*. [ICCV 2023]
- Xiaotian Li, **Xiang Zhang**, Taoyue Wang and Lijun Yin. *Knowledge-Spreader: Learning Facial Action Dynamics from Single Label Clips via Progressive Knowledge Distillation*. [ICCV 2023]
- Xiaotian Li, Taoyue Wang, Geran Zhao, **Xiang Zhang**, Xi Kang and Lijun Yin.*ReactioNet: Learning High-order Facial Behavior from Universal Stimulus-Reaction by Dyadic Relation Reasoning*. [ICCV 2023]
- **Xiang Zhang** and Lijun Yin.*Multi-Modal Learning for AU Detection Based on Multi-Head Fused Transformers*. [FG 2021]
- 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*. [FG 2020]

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.

MULTI-MODAL LEARNING RESEARCH

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

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.