Xiang Zhang

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Summary

Innovative Ph.D. candidate in Computer Science with 5+ years of experience in computer vision, deep learning, generative AI, and multi-modal learning.

Proven track record of publishing in top-tier conferences and developing advanced facial analysis technologies. Adept in Python with a strong ability to work both independently and collaboratively.

Seeking an **internship/new grad** to apply my skills and research in a dynamic role in the industry. Expected to **graduate in 2025 Spring**.

Education

Binghamton University   *Binghamton, NY*

PH.D. CANDIDATE IN COMPUTER SCIENCE;   *Aug. 2019 - May. 2025(expected)*

Binghamton University   *Binghamton, NY*

MASTER OF SCIENCE IN COMPUTER SCIENCE, GPA: 3.81/4.0   *Aug. 2017 - May 2019*

Nanchang Hangkong University   *Nanchang, China*

BACHELOR IN ELECTRONIC SCIENCE AND TECHNOLOGY, GPA: 3.2/4.0   *Sep. 2008 - June 2012*

Research Experiences

Advanced Research Projects Agency (ARPA) and Kitware Inc

BIOMETRIC RECOGNITION AND IDENTIFICATION AT ALTITUDE AND RANGE(BRIAR)   *05/31/2023 - Present*

- Conduct cutting-edge research in long-distance face recognition and multi-modal algorithms, focusing on integrating advanced technologies into practical systems.
- Utilize generative models and multi-modal features (i.e., images, turbulence-simulated images, restored images, and Nerf features) to enhance face recognition capabilities.
- Collaborate with Kitware Inc. to transfer research advancements into their framework, contributing to the overall face recognition system.

Binghamton University GAIC Lab

MULTI-MODAL LEARNING RESEARCH   *Aug. 2019 - Present*

- Study in multi-modal learning using texture, thermal, 3D data, text, and EEG data for facial behavior analysis, such as AU detection and facial expression recognition.
- Developed and evaluated algorithms for facial action unit detection and facial expression recognition, contributing to publications in ICCV and other top-tier venues.
- Build multi-modal human emotion databases, including video, audio, 3D, thermal, and physiological signals. Processed and organized the collected data for public release. Databases are known as BP4D++, BU-EEG, and ReactioNet.

Skills

Programming Languages	Python, C/C++, Java, JavaScript, Objective-C, Matlab
Frameworks	PyTorch, PyTorch-Lighting, Tensorflow, Scikit-Learn, Numpy, Pandas
Platforms & Tools	Linux, Docker, Git, Azure, CI/CD pipeline

Selected 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]

- Xiaotian Li, Zheng Zhang, **Xiang Zhang**, Taoyue Wang, Zhihua Li, Huiyuan Yang, Umur Ciftci, Qiang Ji, Jeffrey Cohn, and Lijun Yin.*Disagreement Matters: Exploring Internal Diversification for Redundant Attention in Generic Facial Action Analysis.*. [TAC 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]

Experience

JD.com, Inc.
Beijing, China

ɪOS Sᴏғᴛᴡᴀʀᴇ Eɴɢɪɴᴇᴇʀ
Feb. 2014 - Jul. 2017

- Responsible for the development and updating of 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

ɪOS Sᴏғᴛᴡᴀʀᴇ Eɴɢɪɴᴇᴇʀ
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.