

ANDONG DENG

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RESEARCH INTERESTS

Computer Vision, Multimodal Learning, Video LLMs, Generative Models, etc.

EDUCATION

University of Central Florida, U.S.

Sep. 2022 - Present

PhD of Computer Science

Advisor: Dr. Chen Chen

Shanghai Jiao Tong University, China

Sep. 2018 - Mar. 2021

Master of Engineering

Advisor: Dr. Weiwei Cai

Sichuan University, China

Sep. 2013 - Jun. 2017

Bachelor of Energy and Power Engineering

RESEARCH EXPERIENCE

Research Assistant, University of Central Florida

Apr. 2022 - Present

Worked with: Dr. Chen Chen (chen.chen@crcv.ucf.edu)

Video Understanding and Multimodal Learning:

- Benchmarking video action recognition
- Multimodal reasoning in dynamism scenes
- Application of video action recognition on Autistic Spectrum Disorder

Research Assistant, Renmin University of China

Apr. 2021 - Jun. 2022

Worked with: Dr. Di Hu (dihu@ruc.edu.cn)

Multimodal machine perception:

- Audio-driven video generation
- Training improvement of audio-visual video understanding
- Audio-visual temporal action/event localization

Research Assistant, Shanghai Jiao Tong University

Sep. 2018 - Mar. 2021

Worked with: Dr. Weiwei Cai (cweiwei@sjtu.edu.cn)

Application of deep learning on fluid mechanics:

- Tomography-based temperature/flame field reconstruction

WORK EXPERIENCE

Research Intern, United Imaging Intelligence (UII America), Boston

May 2024 - Nov. 2024

Worked with: Dr. Zhongpai Gao (gaozhongpai@gmail.com) and Dr. Ziyang Wu (ziyang.wu@uii-ai.com)

- Multimodal LLMs for time perception in videos

Research Intern, Baidu Research, Big Data Lab, Beijing

Jul. 2021 - Mar. 2022

Worked with: Dr. Xingjian Li (lixingjian@baidu.com) and Dr. Dejing Dou (doudejing@baidu.com)

- Self-supervised pre-training for object detection
- Transfer learning for image classification

Research Intern, Sense Time, Shanghai

May. 2020 - Jun. 2021

Worked with: Dr. Yang Cao (caoyang@sensetime.com) and Dr. Rui Zhao (zhaorui@sensetime.com)

- Unsupervised video representation disentanglement and generation

PUBLICATIONS

1. **Andong Deng***, Taojiannan Yang* and Chen Chen. A Large-scale Study of Spatiotemporal Representation Learning with a New Benchmark on Action Recognition, ICCV, 2023
2. **Andong Deng***, Xingjian Li*, Di Hu, Tianyang Wang, Haoyi Xiong and Cheng-Zhong Xu. Towards Inadequately Pre-trained Models in Transfer Learning, ICCV, 2023
3. **Andong Deng**, Taojiannan Yang, Chen Chen, Qian Chen, Leslie Neely, Sakiko Oyama, Language-assisted Deep Learning for Autistic Behaviors Recognition, Smart Health, 2023
4. Shoubin Yu, Zhongying Zhao, Haoshu Fang, **Andong Deng** and Cewu Lu. Regularity Learning via Explicit Distribution Modeling for Skeletal Video Anomaly Detection, IEEE Transactions on Circuits and Systems for Video Technology, 2023
5. Wenke Xia, Xingjian Li, **Andong Deng**, Haoyi Xiong, Dejing Dou, and Di Hu. Robust Cross-Modal Knowledge Distillation for Unconstrained Videos, ICME, 2023
6. Xiaokang Peng*, Yake Wei*, **Andong Deng**, Dong Wang and Di Hu. Balanced Multimodal Learning via On-the-fly Gradient Modulation, CVPR, 2022, *Oral*

PRE-PRINT

1. **Andong Deng**, Zhongpai Gao, Anwesa Choudhuri, Benjamin Planche, Meng Zheng, Bin Wang, Terrence Chen, Chen Chen, Ziyang Wu. Seq2Time: Sequential Knowledge Transfer for Video LLM Temporal Grounding, <https://arxiv.org/abs/2411.16932>
2. **Andong Deng**, Tongjia Chen, Shoubin Yu, Taojiannan Yang, Lincoln Spencer, Yapeng Tian, Ajmal Saeed Mian, Mohit Bansal and Chen Chen. Motion-Grounded Video Reasoning: Understanding and Perceiving Motion at Pixel Level, <https://arxiv.org/abs/2411.09921>
3. Bin Wang, Anwesa Choudhuri, Meng Zheng, Zhongpai Gao, Benjamin Planche, **Andong Deng**, Qin Liu, Terrence Chen, Ulas Bagci, Ziyang Wu. Order-aware Interactive Segmentation, <https://arxiv.org/abs/2410.12214>
4. Haopeng Li, **Andong Deng**, Qiuhong Ke, Jun Liu, Hossein Rahmani, Yulan Guo, Bernt Schiele and Chen Chen. Sports-QA: A Large-Scale Video Question Answering Benchmark for Complex and Professional Sports, <https://arxiv.org/abs/2401.01505>

PROJECTS

Hidden Activity Signal and Trajectory Anomaly Characterization, IARPA. *May. 2023 - Dec. 2023*
- Anomaly detection for time series data (GPS coordinates)

SERVICES

Reviewer of CVPR 2022, ECCV 2022 and ICCV 2023

SKILLS

Programming: Python, Matlab
Frameworks: PyTorch, TensorFlow, NumPy