

TAOJIANNAN YANG

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EDUCATION

- University of Central Florida (UCF)** *Aug. 2021 - Jul. 2023*
Ph.D. in Computer Science
Advisor: Dr. Chen Chen
- University of North Carolina at Charlotte (UNCC)** *Jan. 2019 - Aug. 2021*
Ph.D. in Electrical and Computer Engineering
Advisor: Dr. Chen Chen
- University of Science and Technology of China (USTC)** *Sep. 2013 - Jun. 2017*
Bachelor of Science in Electronic Information Engineering

RESEARCH INTEREST

Efficient Deep Learning, including large model adaptation, efficient neural networks, adaptive neural networks, self-supervised learning, efficient neural architecture search. Applications in image and video understanding and federated learning.

RESEARCH EXPERIENCE

- Applied Scientist Intern at Amazon Web Services (AWS)** *May. 2022 - Dec. 2022*
Host: Yi Zhu, Mu Li
Project: Adapting image models for efficient video understanding
- Research Intern at Bytedance Inc.** *May. 2021 - Oct. 2021*
Host: Linjie Yang, Xiaojie Jin
Project: Efficient neural architecture search
- Multimedia Laboratory, Shenzhen Institute of Advanced Technology** *Jul. 2017 - Jul. 2018*
Host: Yu Qiao
Project: Light-weight deep neural networks

SELECTED PUBLICATIONS

* indicates equal contribution

Preprints

1. A Deng*, **T Yang***, C Chen “A Large-scale Study of Spatiotemporal Representation Learning with a New Benchmark on Action Recognition”. *Under review*.
2. G Sun, M Mendieta, **T Yang**, C Chen “Conquering the Communication Constraints to Enable Large Pre-Trained Models in Federated Learning”. *arXiv:2210.01708*
3. C Zheng*, W Wu*, **T Yang**, S Zhu, C Chen, R Liu, J Shen, N Kehtarnavaz, M Shah. “Deep Learning-Based Human Pose Estimation: A Survey”. *arXiv preprint arXiv:2012.13392*.

Journal

1. **T Yang**, S Zhu, M Mendieta, P Wang, R Balakrishnan, M Lee, T Han, M Shah, C Chen. “MutualNet: Adaptive ConvNet via Mutual Learning from Different Model Configurations”. *IEEE Transaction on Pattern Analysis and Machine Intelligence (TPAMI)*.
2. S Zhu, **T Yang**, C Chen. “Visual Explanation for Deep Metric Learning”. *IEEE Transactions on Image Processing (TIP)*.

Conference

1. **T Yang**, Y Zhu, Y Xie, A Zhang, C Chen, M Li. “AIM: Adapting Image Models for Efficient Video Action Recognition”. *International Conference on Learning Representations (ICLR)*, 2023.
2. **T Yang**, L Yang, X Jin, C Chen. “Revisiting Training-free NAS Metrics: An Efficient Training-based Method”. *Winter Conference on Applications of Computer Vision (WACV)*, 2023
3. M Mendieta, **T Yang**, P Wang, M Lee, Z Ding, C Chen “Local Learning Matters: Rethinking Data Heterogeneity in Federated Learning”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022 (**Best Paper Finalist, 33 out of 8161**)
4. **T Yang**, S Zhu, C Chen. “GradAug: A New Regularization Method for Deep Neural Networks”. *Neural Information Processing Systems (NeurIPS)*, 2020
5. **T Yang**, S Zhu, C Chen, S Yan, M Zhang, A Willis. “MutualNet: Adaptive ConvNet via Mutual Learning from Network Width and Resolution”. *European Conference on Computer Vision (ECCV)*, 2020 (**Oral, 104 out of 5205**)
6. C Zheng, M Mendieta, **T Yang**, C Chen “HeatER: An Efficient and Unified Network for Human Reconstruction via Heatmap-based Transformer”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023
7. C Zheng, S Zhu, M Mendieta, **T Yang**, C Chen, Z Ding. “3D Human Pose Estimation with Spatial and Temporal Transformers”. *International Conference on Computer Vision (ICCV)*, 2021
8. S Zhu, **T Yang**, C Chen. “VIGOR: Cross-View Image Geo-localization beyond One-to-one Retrieval”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021
9. W Yu*, **T Yang***, C Chen. “Towards Resolving the Challenge of Long-tail Distribution in UAV Images for Object Detection”. *Winter Conference on Applications of Computer Vision (WACV)*, 2021
10. S Zhu, **T Yang**, C Chen. “Revisiting Street-to-Aerial View Image Geo-localization and Orientation Estimation”. *Winter Conference on Applications of Computer Vision (WACV)*, 2021
11. C Li, **T Yang**, S Zhu, C Chen, S Guan. “Density Map Guided Object Detection in Aerial Images”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) (EarthVision Workshop)*, 2020

PROFESSIONAL SERVICES

Journal Reviewer

TPAMI, TIP

Conference Reviewer

ICCV 2021-2023, ECCV 2022, CVPR 2022-2023, ICML 2022, ICLR 2022-2023, NeurIPS 2021-2022

Volunteer

NeurIPS 2020

PROGRAMMING LANGUAGES AND TOOLBOXES

Most experienced with: Python. PyTorch.

Some experience with: Matlab, C/C++. TensorFlow, Caffe, OpenCV.