Yifan Jiang

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Education

The University of Texas at Austin, Austin, USA　　　　　　　　　　　　　2020 – Present
Ph.D. in Electrical and Computer Engineering
Research Interests [1, 2, 3, 4, 5, 6, 7, 8]:
Computational Photography, Generative Models, Neural Architecture Search

Texas A&M University, College Station, USA　　　　　　　　　　　　　　2019 – 2020
Ph.D. in Computer Science (Transferred)

Huazhong University of Science and Technology, Wuhan, China　　　　　　2015 – 2019
B.E. in Electronic Information Engineering

Publication

[1] **Yifan Jiang**, Xinyu Gong, Junru Wu, Honghui Shi, Zhicheng Yan, and Zhangyang Wang. "AutoX3D: Searching Ultra-Efficient Architecture for Video Understanding". In: *Winter Conference on Applications of Computer Vision (**WACV**)* (2022).

[2] **Yifan Jiang**, Shiyu Chang, and Zhangyang Wang. "TransGAN: Two Pure Transformers can Make One Strong GAN and That Can Scale Up". In: *Thirty-fifth Conference on Neural Information Processing Systems (**NeurIPS**)* (2021).

[3] Bowen Pan, Rameswar Panda, **Yifan Jiang**, Zhangyang Wang, Rogerio Feris, and Aude Oliva. "IA-RED^2: Interpretability-Aware Redundancy Reduction for Vision Transformers". In: *Thirty-fifth Conference on Neural Information Processing Systems (**NeurIPS**)* (2021).

[4] **Yifan Jiang**, Zhang He, Jianming Zhang, Yilin Wang, Zhe Lin, Kalyan Sunkavalli, Simon Chen, Sohrab Amirghodsi, Sarah Kong, and Zhangyang Wang. "SSH: A Self-supervised Framework for Image Harmonization". In: *International Conference on Computer Vision (**ICCV**)* (2021).

[5] Yonggan Fu, Zhongzhi Yu, Yongan Zhang, **Yifan Jiang**, Chaojian Li, Yongyuan Liang, Mingchao Jiang, Zhangyang Wang, and Yingyan Lin. "InstantNet: Automated Generation and Deployment of Instantaneously Switchable-Precision Networks". In: *The 58th Design Automation Conference (**DAC**)* (2021).

[6] Tianjian Meng*, Xiaohan Chen*, **Yifan Jiang**, and Zhangyang Wang. "A Design Space Study for LISTA and Beyond". In: *International Conference on Learning Representations (**ICLR**)* (2021).

[7] Xinyu Gong, Shiyu Chang, **Yifan Jiang**, and Zhangyang Wang. "AutoGAN: Neural Architecture Search for Generative Adversarial Networks". In: *International Conference on Computer Vision (**ICCV**)* (2019).

[8] **Yifan Jiang**, Xinyu Gong, Ding Liu, Yu Cheng, Chen Fang, Xiaohui Shen, Jianchao Yang, Pan Zhou, and Zhangyang Wang. "EnlightenGAN: Deep Light Enhancement without Paired Supervision". In: *Transcation on Image Processing (**TIP**)* (2020).

[9] Xi Ouyang*, Yu Cheng*, **Yifan Jiang**, Chun-Liang Li, and Pan Zhou. "Pedestrian-Synthesis-GAN: Generating Pedestrian Data in Real Scene and Beyond". In: *preprint arXiv:1804.02047* (2018).

Research Experience

Google Research, Mountain View, USA　　　　　　　　　　　　　　May. 2021 – present
Research Intern, Adviser: Dr. Tianfan Xue, Dr. Ben Mildenhall, Dr. Jon Barron.
- Working on fast image processing tool.

Adobe, San Jose, USA　　　　　　　　　　　　　　　　　　　　May. 2020 – Nov. 2020
Research Intern, Adviser: Dr. He Zhang and Dr. Jianming Zhang.
- Designed a self-supervised method for image harmonization that does not require human annotation labels.
- Collected a new dataset for real-world image harmonization benchmark and wrote the paper [4].

Bytedance AI Lab, Beijing, China   Jan. 2019 – Aug. 2019

Research Intern, Adviser: Dr. Jianchao Yang and Dr. Xiaohui Shen and Dr. Ding Liu.
- Designed a jointly image denoising and low-light enhancement algorithm, which will appear in beauty selfie camera app FaceU

The University of Texas at Austin, Austin, TX   July. 2020 – Present

Research Assistant, Working with Prof. Zhangyang (Atlas) Wang
  Research Interests:
- Generative Models[2, 7].
- Neural Architecture Search [5, 6, 7].
- Computational Photography and Image Processing [8, 4].

Huazhong University of Science and Technology, Wuhan, China   May. 2017 – June. 2018

Research Assistant with Prof. Pan Zhou, Collaborated with Dr. Yu Cheng (Microsoft AI Research)

  Generating Pedestrian Data in Real Scene   *July. 2017 – Nov. 2017*
- Designed Pedestrian-Synthesis GAN [9] with a group member, which can generate labeled pedestrian data to support the training of pedestrian detectors such as FastRCNN, SSD, YOLO.
- Conducted experiment to study the effort of data augmentation by adding synthetic pedestrian data to real dataset and testing mAP results.
- Wrote the paper with two group members.

COMMUNITY SERVICES

- Reviewer for: Transaction on Image Processing (TIP), CVPR'2021, ICCV'2021, WACV'2022, CVPR'2022
- Workshop Organizer for: ECCV RLQ-TOD Workshop 2020

INVITED TALKS

- "TransGAN: Two Transformers Can Make One Strong GAN" at [cai-workshop], [SHI Lab @University of Oregon]

SOCIAL MEDIA REPORT

- My work TransGAN [2] was highlighted by high-profile Tech bloggers, as well as considered as the most influential new paper of the month (Feb 2021).

SKILLS

- **Programming Languages**: Python, C/C++, Javascript, Java, LaTeX Matlab, Shell
- **Deep Learning & Computer Vision**: Pytorch, JAX/FLAX, Tensorflow, openCV
- **Web Design**: HTML, CSS, Flask, Tornado ,Django
- **Operating Systems**: Linux, Windows, macOS
- **FPGA**: VerilogHDL