Yifan Jiang

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Education

The University of Texas at Austin, Austin, USA 2020 – Present

Ph.D. in Electrical and Computer Engineering
Advisor: Prof. Zhangyang (Atlas) Wang
Research Interests: Computational Photography, Generative Models, AutoML

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

(* indicates equal contribution)

1. **Yifan Jiang***, Dejia Xu*, Peihao Wang, Zhiwen Fan, Humphrey Shi, and Zhangyang Wang. "SinNeRF: Training Neural Radiance Fields on Complex Scenes from a Single Image", European Conference on Computer Vision (**ECCV**) 2022.
2. **Yifan Jiang***, Zhiwen Fan*, Peihao Wang*, Xinyu Gong, Dejia Xu, and Zhangyang Wang. "Unified Implicit Neural Stylization", European Conference on Computer Vision (**ECCV**) 2022.
3. **Yifan Jiang**, Bartlomiej Wronski, Ben Mildenhall, Jonathan T. Barron, Zhangyang Wang, and Tianfan Xue. "Fast and High-Quality Image Denoising via Malleable Convolutions", European Conference on Computer Vision (**ECCV**) 2022.
4. **Yifan Jiang**, Xinyu Gong, Junru Wu, Honghui Shi, Zhicheng Yan, and Zhangyang Wang, "AutoX3D: Searching Ultra-Efficient Architecture for Video Understanding", Winter Conference on Applications of Computer Vision (**WACV**) 2022.
5. **Yifan Jiang**, Shiyu Chang, and Zhangyang Wang, "TransGAN: Two Pure Transformers can Make One Strong GAN and That Can Scale Up", Advances in Neural Information Processing Systems (**NeurIPS**), 2021.
6. **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", International Conference on Computer Vision (**ICCV**), 2021.
7. **Yifan Jiang**, Xinyu Gong, Ding Liu, Yu Cheng, Chen Fang, Xiaohui Shen, Jianchao Yang, Pan Zhou, Zhangyang Wang, "EnlightenGAN: Deep Light Enhancement without Paired Supervision", Transaction on Image Processing (**TIP**)
8. Dejia Xu*, Peihao Wang*, **Yifan Jiang**, Zhiwen Fan, Zhangyang Wang, "Signal Processing for Implicit Neural Representations", Advances in Neural Information Processing Systems (**NeurIPS**), 2022.
9. Dejia Xu, Hayk Poghosyan, Shant Navasardyan, **Yifan Jiang**, Humphrey Shi, Zhangyang Wang, "ReCoRo: Region-Controllable Robust Light Enhancement by User-Specified Imprecise Masks", ACM Multimedia (**MM**), 2022
10. Zeyuan Chen, **Yifan Jiang**, Dong Liu, Zhangyang Wang, "CERL: A Unified Optimization Framework for Light Enhancement with Realistic Noise", Transaction on Image Processing (**TIP**)
11. Bowen Pan, Rameswar Panda, **Yifan Jiang**, Zhangyang Wang, Rogerio Feris, and Aude Oliva, "IA-RED2: Interpretability Aware Redundancy Reduction for Vision Transformers", Advances in Neural Information Processing Systems (**NeurIPS**), 2021.
12. 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", Design Automation Conference (**DAC**), 2021.
13. Tianjian Meng*, Xiaohan Chen*, **Yifan Jiang**, and Zhangyang Wang, "A Design Space Study for LISTA and Beyond", International Conference on Learning Representations (**ICLR**), 2021.
14. Xinyu Gong, Shiyu Chang, **Yifan Jiang**, and Zhangyang Wang. "AutoGAN: Neural Architecture Search for Generative Adversarial Networks", International Conference on Computer Vision (**ICCV**), 2019.

Research Experience

Adobe, San Jose, USA — May. 2022 – Present

Research Intern with Marc Levoy's Team, Adviser: Dr. Zhihao Xia, Dr. Cecilia Zhang, Dr. Jiawen Chen.

- Working on monocular video depth estimation

Google Research , Mountain View, USA — May. 2021 – May. 2022

Research Intern with GCam, Adviser: Dr. Tianfan Xue, Bart Wrongski, Dr. Ben Mildenhall, Dr. Jon Barron.

- Developed a fast denoising network by predicting spatially-varying kernels at low resolution and using a fast fused op to jointly upsample and apply these kernels at full resolution. The resultant paper was accepted by ECCV'2022
- Designed a high-fidelity neural radiance field that can render high-qulity novel view images.

Adobe, San Jose, USA — May. 2020 – Nov. 2020

Research Intern with Appled Research Team(ART), Adviser: Dr. He Zhang and Dr. Jianming Zhang.

- Developed a self-supervised method for image harmonization that does not require human annotation labels. The resultant paper was accepted by ICCV'2021

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

Research Intern with US CV Lab, 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

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

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

- Designed Pedestrian-Synthesis GAN with a group member, which can generate labeled pedestrian data to support the training of pedestrian detectors such as FastRCNN, SSD, YOLO.

Community Services

- Reviewer for: CVPR'2021-2022, ICCV'2021, ECCV'2022, ICML'2022, NeurIPS'2022, ICLR'2023, Siggraph Aisa'2022, Siggraph'2022, WACV'2022, Transaction on Image Processing (TIP), International Journal of Computer Vision (IJCV), NeuroComputing
- Workshop Organizer for: ECCV RLQ-TOD Workshop 2020

Invited Talks

- "Fast and High-Quality Image Denoising via Malleable Convolutions" at Adobe Marc Levoy's team.
- "TransGAN: Two Transformers Can Make One Strong GAN" at [cai-workshop], [SHI Lab @University of Oregon]

Media Highlight

- TransGAN was covered by Quanta Magazine and was highlighted by high-profile Tech bloggers, as well as considered as the most influential new paper of the month (Feb 2021).