Yi Zhang

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☰ Research interests

My research interests include computer vision, computational photography, and image processing. Currently, I'm interested in developing general-purpose image restoration backbones and novel computational photography applications. I enjoy the research that can benefit real-world applications. Most of my papers have been used in some commercial products (e.g. XIAOMI's flagship smartphones).

🎓 Education

MMLab, The Chinese University of Hong Kong , Hong Kong   *Sep. 2019 – Present*
Ph.D. candidate, Department of Electronic Engineering
Advised by *Prof. Hongsheng Li & Prof. Xiaogang Wang*

Nanjing University, Nanjing, China   *Sep. 2015 – Jul. 2019*
B.S., Department of Information Management
College of Information System. Rank: 1 / 90

👥 Publication

1. **Yi Zhang**, Dasong Li, Hongwei Qin, Xiaogang Wang and Hongsheng Li. "Self-Supervised Image Denoising via Iterative Data Refinement", **CVPR**, **2022**

2. **Yi Zhang**, Hongwei Qin, Xiaogang Wang and Hongsheng Li. "Rethinking Noise Synthesis and Modeling in Raw Denoising", **ICCV**, **2021**

3. Zhen-Jia Pand, Ruo-Ze Liu, Zhou-Yu Meng, **Yi Zhang**, Yang Yu and Tong Lu. "On reinforcement learning for full-length game of starcraft", **AAAI**, **2019 (Oral)**

📅 Preprint

1. Dasong Li*, **Yi Zhang***, Hongwei Qin, Xiaogang Wang and Hongsheng Li. "Efficient Burst Raw Image Denoising", **IJCV**, **(under review)**

2. Dasong Li, **Yi Zhang**, Ka Chun Cheung, Xiaogang Wang, Hongwei Qin and Hongsheng Li. "Learning Degradation Representations for Image Deblurring", **ECCV**, **2022 (under review)**

3. Ka Leong Cheng, Na FAN, Hao Ouyang, **Yi Zhang**, Ka Lung Law and Qifeng Chen. "Robust Burst Transformer for Real-World Burst Denoising With Large Motion", **ECCV**, **2022 (under review)**

⚙ Experience

SenseTime Research

Research Intern   Worked with Dr. Hongwei Qin & Dr. Ka lung Law   *2019 - 2021*

- One of the core designers of a learning-based low-light imaging system (related areas: denoising, demosaicing, hdr, image enhancement, etc.).
- Several papers (single / burst image denoising) including a large-scale raw image dataset (SenseNoise) have been accepted to CVPR / ICCV.
- The corresponding products (4K HDR Super Night Video) have been deployed on some popular flagship smartphones.

LAMDA Group, Nanjing University

Research Assistant   Worked with *Prof. Yang Yu*   *2017 - 2018*

- We design a hierarchical reinforcement learning approach to achieve over 93% winning rate of Protoss against the most difficult non-cheating built-in AI (level-7) of Terran, training within two days using a single machine with only 48 CPU cores and 8 K40 GPUs.
- The paper has been accepted to AAAI 2019 as an oral presentation. Some reports can be found *here*.

🔖 Honors and Awards

- Postgraduate Scholarship, the Chinese University of Hong Kong   *2019 - Present*
- Outstanding Graduate of Nanjing University   *2019*
- National Scholarship   *2018*
- Merit Student of Jiangsu Province   *2018*