Xutong Ren

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https://tonghelen.github.io/

EDUCATION

Carnegie Mellon University   Pittsburgh, PA, U.S.
Master of Science in Machine Learning.   Aug. 2019 – Dec. 2020

Peking University   Beijing, China
Bachelor of Science in Computer Science.   Sept. 2015 – July 2019
- Major GPA: 3.81/4.00. Honorable Degree of Bachelor of Science.

PUBLICATION

[1] Chen Wei, Lingxi Xie, **Xutong Ren**, Yingda Xia, Chi Su, Jiaying Liu, Qi Tian and Alan Yuille, "Iterative Reorganization with Weak Spatial Constraints: Solving Arbitrary Jigsaw Puzzles for Unsupervised Representation Learning," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, June 2019.

[2] **Xutong Ren**, Mading Li, Wen-Huang Cheng and Jiaying Liu, "Joint Enhancement and Denoising Method via Sequential Decomposition," *IEEE International Symposium on Circuits and Systems (ISCAS)*, May 2018, pp. 1–5. (**oral**)

[3] **Xutong Ren**, Lingxi Xie, Chen Wei, Siyuan Qiao, Chi Su, Jiaying Liu, Qi Tian, Elliot Fishman and Alan Yuille, "Generalized Coarse-to-Fine Visual Recognition with Progressive Training," *Arxiv e-print 1811.12047*.

[4] **Xutong Ren**, Wenhan Yang, Wen-Huang Cheng, Jiaying Liu, "LR3M: Robust Low-Light Enhancement via Low-Rank Regularized Retinex Model," submitted to *IEEE Transactions on Image Processing (TIP)*.

PATENT

[1] Jiaying Liu, **Xutong Ren**, Mading Li, Zongming Guo, "Method, System and Computer Device of Low-light Enhancement and Denoising," CN201810243551.9

EXPERIENCE

Research Assistant
Institute of Computer Science and Technology, Peking University.   Beijing, China
Advisor: Prof. Jiaying Liu, PKU.   May 2017 – June 2019

Proposed a joint low-light enhancement and denoising strategy based on a novel sequential Retinex decomposition concept, making simultaneous processing possible and improving visual quality. Explored a new issue of text effect assessment for estimating the quality of images generated by text effect transfer models.

Machine Learning Engineering
Google Beijing Office   Beijing, China
Google AI ML Winter Camp.   Jan. 2019 – Jan. 2019

Focused on the domain of image to image translation and realized local face attribute transfer on real human images in an unsupervised way, using cartoon images as a bridge. Trained and evaluated five different generative networks. Won the *Most Technical Award*.

Research Visiting
Center for Imaging Science, Johns Hopkins University.   Baltimore, MD, U.S.
Advisor: Prof. Alan Yuille, JHU.   July 2018 – Sept. 2018

Focused on visual representation learning in a self-supervised manner and built a recurrent solution to jigsaw puzzles of arbitrary permutations to transfer learned weights. Proposed a generalized coarse-to-fine model with progressive training strategy to improve stability and relieve over-fitting, which brings gains of $2\% - 10\%$ in a wide range of visual recognition tasks.

Teaching Assistant
School of Electronics Engineering and Computer Science, Peking University   Beijing, China
Director: Prof. Guoping Wnag, PKU.   Sept. 2017 – Jan. 2018

Taught major compulsory course *Introduction to Computer Systems*.

HONORS

- Best Technical Project Award at Google AI ML Winter Camp   2019
- Peking University Award for Academic Excellents   2018, 2017
- Wang Shengdi Scholarship (top 10%)   2018
- 8108 College Scholarship (top 10%)   2017
- The Third Prize of Peking University ACM ICPC   2017
- Peking University Award for Excellent Volunteers   2016

SKILLS

- Program Languages: C/C++, Python, MATLAB, Lua;
- Deep Learning Framework: PyTorch, Torch.