Taihong Xiao

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Education

Ph.D. Candidate, Computer Science, University of California at Merced, 2018-present (GPA: 4.0/4.0)

M.S. Applied Mathematics, School of Mathematical Sciences, Peking University, 2015-2018

B.S. Mathematics, Taishan College, Shandong University, 2011-2015

Research Experience

1. Research Assistant, UC Merced, Aug. 2018 - present — Advisor: Ming-Hsuan Yang
   - Visual Privacy Preserving
   - Learning Correspondence from Images and Videos
2. Research Intern, Google Research, Mountain View, May, 2021 - present — Host: Andre Araujo
   - Keypoint Detector and Feature Descriptor for Instance Matching
3. Research Intern, NVIDIA Research, Santa Clara, May - Dec. 2020 — Mentor: Sifei Liu
   - Self-Supervised General Correspondence Learning
4. Research Intern, Google AI, Mountain View, May - Aug., 2019 — Host: Jinwei Yuan
   - Unsupervised Learning of Optical Flow
5. Research Intern, Momenta, Beijing, Jun. - Aug., 2018 — Advisor: Chaoqun Weng
   - Domain Adaptation in Object Detection
6. Research Intern, Megvii (Face++), Beijing, Jan. - Nov., 2017 — Advisor: Shuchang Zhou
   - Face Attributes Transfiguration
   - Quantized Neural Networks
7. Research Assistant, Peking University, Jan. 2016 - May, 2018 — Advisor: Jinwen Ma
   - Multiple Face Attribute Transfer
   - Disentangled Representations
   - Pedestrian Tracking

Publications (Google Scholar)

1. Structured Sparsification with Joint Optimization of Group Convolution and Channel Shuffle
   Xin-Yu Zhang*, Kai Zhao, **Taihong Xiao**, Ming-Ming Cheng, Ming-Hsuan Yang
   Conference on Uncertainty in Artificial Intelligence (UAI), 2021
   [ArXiv] [GitHub]

2. Semi-Supervised Learning with Meta-Gradient
Taihong Xiao*, Xin-Yu Zhang*, Haolin Jia, Ming-Ming Cheng, Ming-Hsuan Yang
International Conference on Artificial Intelligence and Statistics (AISTATS), 2021
[Paper] [ArXiv] [GitHub]

3. Learnable Cost Volume Using the Cayley Representation
Taihong Xiao, Jinwei Yuan, Deqing Sun, Qifei Wang, Xin-Yu Zhang, Kehan Xu, Ming-Hsuan Yang
Proceedings of the European Conference on Computer Vision (ECCV), 2020
[Paper] [ArXiv] [GitHub]

4. Adversarial Learning of Privacy-Preserving and Task-Oriented Representations
Taihong Xiao, Yi-Hsuan Tsai, Kihyuk Sohn, Manmohan Chandraker, Ming-Hsuan Yang
Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI), 2020
[ArXiv]

5. ELEGANT: Exchanging Latent Encodings with GAN for Transferring Multiple Face Attributes
Taihong Xiao, Jiapeng Hong, Jinwen Ma
Proceedings of the European Conference on Computer Vision (ECCV), 172–187, 2018
[Paper] [ArXiv] [Poster] [GitHub]

6. DNA-GAN: Learning Disentangled Representations from Multi-Attribute Images
Taihong Xiao, Jiapeng Hong, Jinwen Ma
International Conference on Learning Representations Workshop (ICLR), 2018
[Paper] [ArXiv] [Poster] [GitHub]

7. GeneGAN: Learning Object Transfiguration and Attribute Subspace from Unpaired Data
Shuchang Zhou, **Taihong Xiao**, Yi Yang, Dieqiao Feng, Qinyao He, Weiran He
Proceedings of the British Machine Vision Conference (BMVC), 2017 (**Oral Presentation**)
[Paper] [ArXiv] [Slide] [GitHub]

8. IQNN: Training Quantized Neural Networks with Iterative Optimizations
Shuchang Zhou, He Wen, **Taihong Xiao**, Xinyu Zhou
International Conference on Artificial Neural Networks (ICANN), 688-695, 2017
[Paper]

9. An Integrated Learning Framework for Pedestrian Tracking
Taihong Xiao, Jinwen Ma
International Conference on Intelligent Computing (ICIC), 95-106, 2017 (**Oral Presentation**)
[Paper] [Slide] [Video] [GitHub]

Open Source Projects (GitHub)

1. **Wechat_AutoJump** (1.3k Star)
AI plays WeChat Jump Game
[GitHub] [Zhihu] [Media]

2. **3D-GAN-pytorch**
Pytorch implementation of 3D-GAN
[GitHub] [Paper]

3. **Adversarial_Reprogramming**
Adversarial Reprogramming of Neural Networks
[GitHub] [Paper]

Teaching & Services

1. Conference Reviewer, CVPR, ICCV, ECCV, NeurIPS, AAAI, AISTATS, WACV, BMVC, AVSS
2. Journal Reviewer, TIP
3. Teaching Assistant, CSE 185 Introduction to Computer Vision, Spring 2020
4. Teaching Assistant, CSE 015 Discrete Math, UC Merced, Spring and Fall 2019
5. Teaching Assistant, CSE 140 Computer Architecture, UC Merced, Fall 2018
6. Teaching Assistant, Advanced Math B, Peking University, Fall 2016
7. Teaching Assistant, Mathematical Analysis I, Shandong University, Fall 2014

Honors & Awards

1. GSA Conference Travels Award, UC Merced, 2020
2. ICLR Travel Award, 2018
3. National Scholarship, Peking University, 2015, 2016, 2017
4. Excellent Academic Performance Award, Peking University, 2016
5. Outstanding Thesis Award in Shandong Province, 2015
6. National Encouragement Scholarship, Shandong University, 2013