Taihong Xiao

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Education

Ph.D. Computer Science, University of California at Merced, 2018-2023

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

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

Research & Work Experience

1. Software Engineer, Google Research, Dec. 2023 - Present
2. Research Assistant, UC Merced, Aug. 2018 - May 2023 — Advisor: Ming-Hsuan Yang
3. Research Intern, Google Cloud, Sunnyvale, May 2022 - Dec. 2022 — Host: Liangliang Cao
4. Research Intern, Google Research, Mountain View, May 2021 - April 2022 — Host: Andre Araujo
5. Research Intern, NVIDIA Research, Santa Clara, May - Dec. 2020 — Mentor: Sifei Liu
6. Research Intern, Google AI, Mountain View, May - Aug. 2019 — Host: Jinwei Yuan
7. Research Intern, NEC Lab America, Cupertino, Sep. 2018 - Sep. 2019 — Mentor: Yi-Hsuan Tsai
8. Research Intern, Momenta, Beijing, Jun. - Aug. 2018 — Advisor: Chaoqun Weng
9. Research Intern, Megvii (Face++), Beijing, Jan. - Nov., 2017 — Advisor: Shuchang Zhou
10. Research Assistant, Peking University, Jan. 2016 - May 2018 — Advisor: Jinwen Ma

Publications (Google Scholar)

1. Exploiting Category Names for Few-Shot Classification with Vision-Language Models
Taihong Xiao, Zirui Wang, Liangliang Cao, Jiahui Yu, Shengyang Dai, Ming-Hsuan Yang
International Conference on Learning Representations, Multimodal Representation Learning Workshop, 2023
[ArXiv]

2. FlowNAS: Neural Architecture Search for Optical Flow Estimation
Zhiwei Lin*, Tingting Liang*, **Taihong Xiao***, Yongtao Wang, Zhi Tang, Ming-Hsuan Yang
International Journal of Computer Vision (IJCV), 2023
[Paper] [ArXiv] [GitHub]

3. Adaptive Transformers for Robust Few-shot Cross-domain Face Anti-spoofing
Hsin-Ping Huang, Deqing Sun, Yaojie Liu, Wen-Sheng Chu, **Taihong Xiao**, Jinwei Yuan, Hartwig Adam, Ming-Hsuan Yang
Proceedings of the European Conference on Computer Vision (ECCV), 2022
[ArXiv]

4. Learning Contrastive Representation for Semantic Correspondence
Taihong Xiao, Sifei Liu, Shalini De Mello, Zhiding Yu, Jan Kautz, Ming-Hsuan Yang
International Journal of Computer Vision (IJCV), 2022
[Paper] [ArXiv] [GitHub]

5. 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
[Paper] [ArXiv] [Poster] [Slides] [Video] [GitHub]

6. 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] [Supplementary] [ArXiv] [Video] [GitHub]

7. 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]

8. 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]

9. 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]

10. 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]

11. 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]

12. 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]

13. 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, ICML, ICLR, AAAI, AISTATS, WACV, BMVC, AVSS
2. Journal Reviewer, IJCV, TMM, TIP, Eurographics, TCVST, TETCI, Artificial Intelligence Review, Computational Intelligence
3. Teaching Assistant, CSE 120 Software Engineering, Spring 2023
4. Teaching Assistant, CSE 024 Advanced Programming, Spring 2021
5. Teaching Assistant, CSE 005 Intro Computer Applications, Fall 2020
6. Teaching Assistant, CSE 185 Introduction to Computer Vision, Spring 2020
7. Teaching Assistant, CSE 015 Discrete Math, UC Merced, Spring and Fall 2019
8. Teaching Assistant, CSE 140 Computer Architecture, UC Merced, Fall 2018
9. Teaching Assistant, Advanced Math B, Peking University, Fall 2016
10. Teaching Assistant, Mathematical Analysis I, Shandong University, Fall 2014

Honors & Awards

1. CVPR Doctoral Consortium Award, 2023
2. Bobcat Fellowship, UC Merced, 2022
3. GSA Conference Travels Award, UC Merced, 2020
4. ICLR Travel Award, 2018
5. National Scholarship, Peking University, 2015, 2016, 2017
6. Excellent Academic Performance Award, Peking University, 2016
7. Outstanding Thesis Award in Shandong Province, 2015
8. National Encouragement Scholarship, Shandong University, 2013
9. Third Prize, National High School Mathematics League, 2010
10. Second Prize, National Junior High School Applied Physics Knowledge Competition, 2007