Xin Ma

1995-10-29 189-8048-1629
xin.ma@cripac.ia.ac.cn or xin.ma1029@gmail.com
Institute of Automation, Chinese Academy of Sciences
Master in Computer Science computer science, deep learning
95 Zhongguancun East Road, Haidian District, Beijing

Highly-motivated Master in CRIPAC Group led by Prof. Tieniu Tan at Institute of Automation, Chinese Academy of Science. My research interest lies in image super-resolution, image inpainting, generative adversarial network, etc. Currently, several papers have been submitted (or published) to international conferences or journals. In terms of practical application, four national invention patents have been applied.

Education

June 2021 September 2018	School of Artificial Intelligence, University of Chinese Academy of Sciences Master's Degree in Computer Technology
June 2018 September 2014	School of Electrical and Information Engineering, JiangSu University Bachelor's Degree in Applied Electronic Information Engineering

Internships

August 2020
April 2020

Deep learning algorithm engineer @ Meituan •Vision Intelligence Center

- Research on Image Dewatermarking Algorithm: An image dewatermarking algorithm was proposed based on attention mechanism and self-supervised learning. The algorithm is now launched on Meituan and used in Meituan takeaway dewatermarking system. Related work was accepted by ICPR2020 and selected as an oral presentation.

Publications

—— Published Papers ——

- **Xin Ma**, Xiaoqiang Zhou, Huaibo Huang, Zhenhua Chai, Xiaolin Wei, Ran He. "Free-Form Image Inpainting via Contrastive Attention Network " International Conference on Pattern Recognition, 2020 (**oral** 5%)
- Yuhe Ding*, **Xin Ma***, Mandi Luo, Aihua Zheng, Ran He. "Unsupervised Contrastive Photo-to-Caricature Translation based on Auto-distortion" International Conference on Pattern Recognition, 2020 (* equal contribution)
- Mandi Luo, Jie Cao, **Xin Ma**, Xiaoyu Zhang, Ran He. "FA-GAN: Face Augmentation GAN for deformation-invariant face recognition" IEEE Transactions on Information Forensics and Security, 2021
- Gengyun Jia, Meisong Zheng, Chuanrui Hu, **Xin Ma**, Yuting Xu, Luoqi Liu, Yafeng Deng, Ran He, "Inconsistency-aware Wavelet Dual-branch Network for Face Forgery Detection" IEEE Transactions on Biometrics, Behavior, and Identity Science

—— Under Reviews ——

- **Xin Ma**, Xiaoqiang Zhou, Huaibo Huang, Gengyun Jia, Zhenhua Chai, Xiaolin Wei. "Contrastive Attention Network with Dense Field Estimation for Face Completion", Submit to Pattern Recognition, 2021, in Major Revision
- Mandi Luo, **Xin Ma**, Zhihang Li, Jie Cao, Ran He. "Partial NIR-VIS Heterogeneous Face Recognition with Automatic Saliency Search", Submit to IEEE Transactions on Information Forensics and Security, 2021, in Major Revision
- Mandi Luo*, **Xin Ma***, Huaibo Huang, Yi Li, Ran He. "Style-based Variational Autoencoder for Real-World Super-Resolution", Submit it to Winter Conference on Applications of Computer Vision, 2022 (* equal contribution)
- Gengyun Jia, Chaoyou Fu, **Xin Ma**, Ran He. "Uncertainty Aware Image Cropping with Energy-based Models", Submit to AAAI Conference on Artificial Intelligence, 2022

- Huanyu Wang, **Xin Ma**, Junjie Liu, Zhenhua Chai. ”Few-shot Compression with Relation Information Bottleneck”, Submit to AAAI Conference on Artificial Intelligence, 2022
- Mandi Luo, Jie Cao, **Xin Ma**, Chen Gao, Si Liu, Ran He. ”Depth-aware Human Interaction Manipulation with Imitative Contrastive Learning” Submit to AAAI Conference on Artificial Intelligence, 2022

—— Preprints ——

- **Xin Ma**, Xiaoqiang Zhou, Huaibo Huang, Zhenhua Chai, Xiaolin Wei, Ran He. ”Uncertainty-Aware Image Inpainting with Adaptive Feedback Network”, Plan to submit it to T-IFS

Patent Applications

- An image completion method and device based on attention mechanism, Patent Number: CN112184582A
- A method and system with attention mechanism for human pose estimation, Patent Number: CN112149563A (second inventor)
- An image restoration method based on attention mechanism, Patent Number: CN111915522A
- A method for automatic enhancement of image data, Patent Number: CN111882492A (second inventor)
- An image restoration method based on generative adversarial network, Patent Number: CN111815523A
- A generative adversarial network with disentangled representation learning for face image frontalization, Patent Number: CN111428667A
- A face image super-resolution method based on structural prior, Patent Number: CN111080521A

Competences & Languages

Programming Python, C/C++, Matlab, Latex, Pytorch, Linux

Languages **English** — reading & writing (good); listening & speaking (conversant);CET-6

Awards & Certificates

2021 Merit Student of University of Chinese Academy of Sciences
2017 College Student Innovation Project
2016 Excellence Award in Electronic Design Competition