Lin Zhao

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EDUCATION

- **Nankai University** — *Tianjin, China*
  Master of Science in Computer Science — 2020 - 2023
  Advisor: Zhenglu Yang & Shaoping Lu

- **Nankai University** — *Tianjin, China*
  Bachelor of Science in Artificial Intelligence — GPA: 90.23/100 ranking: 3/45 — 2016 - 2020

PUBLICATIONS

1. **Lin Zhao***, Tianchen Zhao*, Zinan Lin, Xuefei Ning, Guohao Dai, Huazhong Yang, Yu Wang.
FlashEval: Towards Fast and Accurate Evaluation of Text-to-image Diffusion Generative Models. In *Computer Vision and Pattern Recognition (**CVPR**)*, 2024.

   – Recognized the need to improve the accuracy efficiency trade-off of diffusion model evaluation and proposed an search algorithm to identify a representative subset to speed up evaluation (10x).

2. **Lin Zhao**, Hongxuan Li, Xuefei Ning, Xinru Jiang.
THInImg: Cross-modal Steganography for Presenting Talking Heads in Images. In *the Winter Conference on Applications of Computer Vision (**WACV**)*, 2024. [PDF]

   – Proposed a framework that manages to hide lengthy audio data inside an identity image, and subsequently generates talking head video (up to 80 seconds) by leveraging the properties of human face.

3. **Lin Zhao***, Shaoping Lu*, Tao Chen, Zhenglu Yang, and Ariel Shamir.
Deep Symmetric Network for Underexposed Image Enhancement with Recurrent Attentional Learning. In *International Conference on Computer Vision (**ICCV**)*, 2021. [PDF] [Project Website]

   – Proposed an invertible framework to solve both underexposed image enhancement and low-light image enhancement problems in a unified structure.

PREPRINT

1. **Lin Zhao**, Hongbo Xu, Hongxuan Li.
The Enhancement for Image in Steganography.

   – Proposed to hide images by exploiting the unavoidable deformations present in image enhancement processes and proved its feasibility. It allows us to obtain the dual effect of hiding information while improving image quality.

RESEARCH EXPERIENCE

- **Tsinghua University** — *Jul 2023 - Present*
  Research Assistant, Adivisor: Dr. Yu Wang — Beijing, China

   – Proposed a coreset selection algorithm to reduce the cost of evaluating stable diffusion, the paper has been accepted by CVPR 2024.

- **Microsoft Research Asia** — *Jul 2022 - Dec 2022*
  Research Intern, Media Computing Group — Beijing, China

   – **Talking-head video generation**: Proposed a video-based generation model that can synthesis realistic portrait videos and edit the portrait videos by intuitively controlling the poses and expressions of given faces in the process.
   – Face video compression: Reduced the bit rate during face video transmission considering the interpretable features of the face.

•Sensetime *Mar 2022 - May 2022*
Research Intern, Multimodal Group Beijing, China

– Trained various models for multimodal data-driven editing of facial expressions and lip movements.

Projects

•Panoramic Image Quality Assessment *Mar 2021 - Dec 2021*

– Proposed a method for constructing hallucinated high-quality features based on generative networks and evaluating the quality of panoramic images captured under different complex conditions.

•Face Swapping *Feb 2020 - Dec 2020*

– Implemented an algorithm to replace real face images with super realistic AI face images (generated by styleGAN). The project involved face detection, face generation with feature control and face blending.

•Image Super-Resolution System for Real Images *Sep 2019 - Feb 2020*

– Built the real image dataset and improved the existing model to effectively solve the problem of artifacts in the generated high-resolution images.

Skills

Programming Languages: Python, C, C++, Matlab, LaTeX
Technical: Pytorch, Tensorflow, Git, Linux

Awards & Honors

• Gongneng Scholarship, Nankai University	*2021*
• Graduate Student Scholarship, Nankai University	*2020*
• Comprehensive First-class Scholarship, Nankai University (Top 5%)	*2019*
• Honorable Mention, Mathematical Contest in Modeling	*2019*
• Comprehensive First-class Scholarship, Nankai University (Top 5%)	*2018*