Zhaowei Gao

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EDUCATION

•ETH Zürich *2019-2023*

Msc in Electrical Engineering and Information Technology Zürich, Switzerland
- Research Interest: Computer Vision, Image and Video Processing, Human-Computer Interaction, NLP
- Courses: Machine Learning, Deep Learning, Probabilistic Artificial Intelligence, Virtual/Augmented Reality, Big Data

•Karlsruhe Institute of Technology *2016-2019*

Bsc in Electrical Engineering and Information Technology, *GPA: 1.9/1.0, Top 15%* Karlsruhe, Germany

EXPERIENCE

•NLP Research Intern *11/2023 - 02/2024*

Aiwave ETHZ Spinoff Hangzhou, China
- Modified large language model for specific character chat
- Data processing/synthesis/Analysis

•A Stronger Baseline For Video Deinterlacing[Arxiv] *02/2023 - 08/2023*

Disney Research Studio Supervised by Dr.Yang Zhang and Prof.Markus Gross Zürich, Switzerland
- Paper submission to Conference and US Patent under review
- Designed a deep network for Image & Video Restoration(Deinterlacing)
  - Incorporates a mechanism for the propagation of temporal information in both image and latent space,
  - Propose a Flow-guided Refinement Block (FRB): flow-guided deformable convolution alignment.
  - Leveraging bidirectional parallel propagation at multiple scale.
  - Our model is lightweight and capable of simultaneously outputting six deinterlaced video frames.
  - This makes it a promising candidate for real-time deinterlacing applications.
  - Training the model at two distinct parameter levels.(namely 0.5M and 9M).
  - Our extensive experimental results demonstrate that our proposed method achieve state-of-the-art performance on 4 various dataset. PSNR/SSIM improved by averagely 0.5DB/0.005.

•AR Application Development for Architecture [Repository] *10/2022 - 02/2023*

Research Assistant in Landscape Architecture Group, ETHZürich Zürich, Switzerland
- Developed and created an AR application based on Unity, C#, and the Hololens 2
- The application enabled users to interact with real-world architectural scenes in augmented reality
- Accurately locates, displays, and records the spatial points needed by architects

PROJECTS

•New Adventures in Noise Modeling [Report] *06/2022 - 10/2022*

Disney Research Studio Supervised by Dr.Yang Zhang and Prof.Markus Gross Zürich, Switzerland
- Investigated a novel method to generate realistic noisy images
- Combined physics-based statistical methods with GAN-based training Network
- Designed and trained a Network (PyTorch framework, SIDD dataset) to generate synthetic noisy images
- The synthetic noisy images could be used for further denoising tasks
- Solved the challenging issue of collecting paired real noise-free and noisy image data

TECHNICAL SKILLS

Languages:English (fluent), German (fluent), Chinese (native) Shanghainese(native)
Technical: Python (PyTorch), C#/C++, Matlab, Unity, Linux, Git, LaTex