I-SHENG FANG

ishengfang.github.io

GitHub, Instagram ⋄ ishengfang

+886 · 935 · 832173 ⋄ nf0126@gmail.com ⋄ ishengfang@icloud.com

EDUCATION

Master of Science   *September, 2020 - February, 2023*
Robotics, National Yang Ming Chiao Tung University, the merger of National Chiao Tung University and National Yang Ming University. GPA: 4.23 / 4.3

Graduate student   *January, 2020 - August, 2020*
Computer Sciences, National Chengchi University.

Bachelor of Science   *September, 2013 - January, 2018*
Mathematical Sciences, National Chengchi University. GPA:2.63 / 4.3

PUBLICATIONS

ES^{3}Net: Accurate and Efficient Edge-based Self-Supervised Stereo Matching Network
I-Sheng Fang, Hsuao-Chieh Wen, Chia-Lun Hsu, Po-Chung Jen, Ping-Yang Chen, Yong-Sheng Chen
Best Paper Award at The 19th Embedded Vision Workshop(EVW) which in conjunction with
IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), 2023.
[Code]
Adapt efficient cost-volume-based stereo matching to self-supervised learning and deploy the network on the drone to improve the robustness. Achieved quasi-real-time depth estimation on NVIDIA Jetson TX2, real-time depth estimation on NVIDIA Jetson AGX Orin. Fine-tuning ES^{3}Net with drone-collected data only need 4 minutes.

Single Image Reflection Removal based on Knowledge-distilling Content Disentanglement
Yan-Tsung Peng, Kai-Han Cheng, I-Sheng Fang, Wen-Yi Peng, Jr-Shian Wu
IEEE Signal Processing Letters(SPL) Feb. 2022
Disentangle the reflection and transmission feature via knowledge distillation in order to remove the reflection with a single image.

Self-Contained Stylization via Steganography for Reverse and Serial Style Transfer
Hung-Yu Chen*, I-Sheng Fang*, Chia-Ming Cheng, Wei-Chen Chiu.
(* indicates equal contribution.)
IEEE Winter Conference on Applications of Computer Vision (WACV), 2020.
[Project Page]
Co-First author. Combine nerual style tansfer and deep steganography in order to reslove reverse and serial issue of stlye transfer.

PROJECTS

A Century of Heartfelt Sentiment
100th Anniversary Special Exhibition of the Taiwan Cultural Association   *2021*
The exhibition of National Museum of Taiwan Literature, Tainan , Taiwan.
Synthesizing DeepFake video for historical figure of Taiwan Cultural Association.

Font Design with Progressive invariant GANs   *2017*
Honorable Mention at MOST Workshop on Generative Adversarial Networks and GAN
Project Competition. Introduced GLCM, a invariant, in progressive growing VAE-GAN
to embed font in $\mathbb{R}^{300}$ latent space. Generated new font or glyph by modtified the latent
space Improved training speed, convergence speed and higher resolution.

Hanzi Typeface Research with Conditional Generative Adversarial Network *2017*
Poster of Taiwan Society for Industrial and Applied Mathematics Annual Meeting.
Using autoencoder and conditional GAN to embed font in $\mathbb{R}^n$ latent space.
Advisor: Prof. Yen-Lung Tsai.

APPOINTMENTS

Microsoft AI R&D Center, Taiwan *March, 2022 - November, 2022*
Software Engineer Intern (Face Science)

Investigated vision transformer(ViT) as a backbone of perceptual loss. Found that the task whether texture-driven or context-driven could affect the performance of the image-to-image translation model trained with ViT or ConvNet as the backbone of perceptual loss.

Enriched Vision Applications Lab *September, 2018 - September, 2019*
Research Assistant

Lab of National Chiao Tung University. My advisor is Professor Wei-Chen Chiu.

The First Step of AI and Deep Learning with Python *July, 2018 - September, 2018*
Teaching Assistant

The MOOCs of National Chengchi University.
Wrote the cue for video cut and additional tips, solved students' problems by online and offline. Teacher is Prof. Yen-lung Tsai.

Fire Department, New Taipei City Government *March-June, 2018*
Fire Fighting Substitute Military Services

Discharged on June 23rd, 2018.

InQtech Co.,Ltd *September, 2017 - June, 2018*
Deep Learning Scientist

InQtech is AI and AIOT startup. Deployed AI in industry.
Researcher of PCB segmentation by GAN project.
Used semi-supervised GAN model to segment part of PCB for robotic assembling.

The First Step of Data Analysis with Python *September, 2017 - January, 2018*
Teaching Assistant

The MOOCs of National Chengchi University.
Wrote the cue for video cut and additional tips, solved students' problems by online and offline. Teacher is Prof. Yen-lung Tsai.

Leopard Mobile *July-September, 2017*
intern

Data analysis in CM Security commerce realization team.
Predicted user behavior prediction with deep learning model

NCCU Deep Learning & TWSIAM Student Group *January, 2017-January, 2018*
Member

Winning **first** place of study group final presentation in NCCU.
Usually discussion host, especially in GAN.