

# I-SHENG FANG

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## EDUCATION

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### Graduate student

*September, 2020 -*

The Master's Degree Program in Robotics, National Yang Ming Chiao Tung University, the merger of National Chiao Tung University and National Yang Ming University.

### Graduate student (temporally leaving)

*January, 2020 -*

Computer Sciences, National Chengchi University.

### Bachelor of Science

*September, 2013 - January, 2018*

Mathematical Sciences, National Chengchi University.

## PUBLICATIONS

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### 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 and 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 neural style transfer and deep steganography, resolve reverse and serial issue of style transfer.

## PROJECTS

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### A Century of Heartfelt Sentiment

**100<sup>th</sup> 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* of MOST Workshop on Generative Adversarial Networks and GAN

Project Competition. Introduced GLCM, an invariant, in progressive growing VAE-GAN

to embed font in  $\mathbb{R}^{300}$  latent space. Generated new font or glyph by modifying 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

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### Microsoft AI RD Center, Taiwan

*March, 2022 -*

*Software Engineer Intern (Face Science)*

**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 23<sup>rd</sup>, 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.

**TECHNICAL SKILL**

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**Computer Languages**

Python

**Deep Learning related**

PyTorch, Keras, TensorFlow

**Computer Vision related**

OpenCV

**Data Science related**

Pandas, Mathplotlib, scikit-learn

**Tools**

VS code, Jupyter Lab &amp; Notebook, Vim, Bash, Linux

**Others**

Film Photography, Typography, Pitching, Curation