



# Ming-Yang Ho

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## Summary

A passionate data scientist and full stack developer who excels at solving practical problems, especially in 2D/3D CV, audio, and medical signal, by designing ML/DL algorithms and building full-stack web applications to provide service. In addition, I am also a graphic designer and clinical pharmacist familiar with psychiatry.

## Skills

### - Programming related

- Python
- PyTorch
- JS React
- C/C++
- MySQL
- Web security
- Docker
- Linux
- Git

### - Others

- Adobe Ps/Ai/Id/Pr/Lr
- Psychiatry
- Clinical pharmacy

## Language

- Mandarin (native)
- English (TOEIC 825) [2014]
- Japanese (JEPT N2) [2018]

## Interests

Machine learning, Deep learning, Full stack development, Web security

## Work experience

### Teaching Assistance (TA)

Machine Learning Summer Schools (2021), Jul. 2021 - Aug. 2021

NTU EE Machine Learning, Feb. 2021 - Jul. 2021

NTU EE Web Programming, Feb. 2021 - Jun. 2021

NTU CSIE Computer Science & Information Technology, Jun. 2021 - Jul. 2021

NTU CSIE Bioinformatics and Cheminformatics, Sep. 2020 - Jan. 2021

### Data Engineer (ML) Intern

Dcard, Jun. 2020 - Dec. 2020

- Built an automatic image cropping system to attract users' attention.
- Invented a malicious applicants detection system with SimCLR.
- Established a system to immediately detect offensive comments.
- Built a persona recommendation system.

### Deep Learning Researcher Intern

Institute of Information Science, Academia Sinica, Jul. 2019 - Aug. 2019

- Leveraged the concept of RGB channels to assist in SNP prediction.

## Honors

### 2021 PyCon Speaker

Implementation of a deep learning-based saliency detection system by Python

### 2021 SITCON Speaker

General adversarial attack against Deep Learning model in image, text, and audio domain

### 2020 HITCON (Hacks in Taiwan) Speaker

Potential Security and Privacy Issues in Novel Taiwanese National eID system

## Awards

### 2021 Multi-label Classification on CT Medical Imaging Competition, 3<sup>rd</sup> prize

### 2020 Unsupervised Learning - Dimension Reduction Competition, 1<sup>st</sup> prize

## Recent Projects

### 2021 SUPERB: Speech processing Universal PERFORMANCE Benchmark

Entrusted by NTU, CMU, MIT, and Facebook AI to build a leaderboard web server for SUPERB Benchmark.

### 2021 Template is all you need: 2D to 3D reconstruction with template learned by contrastive learning

Developed a 2D to 3D reconstruction DL model leveraging the template concept.

### 2021 Adversarial attack embedding analysis

Attempted to explicate which layer in the DL model would be the most vulnerable to the adversarial attack.

### 2021 Commander Song 2: ASR adversarial attack

Developed an adversarial examples generation software by PGD and FGSM algorithms against DeepSpeech 2 ASR model with web server.

## Education

### 2019~2021 M.S. in Bioinformatics (CSIE CMDM lab) GPA 4.20

National Taiwan University (NTU)

### Thesis

Look, Listen, and Diagnose: a deep learning based comprehensive Parkinson's disease evaluation system with 3D point cloud and acoustic features

### Related courses

- |                  |                                       |
|------------------|---------------------------------------|
| DL for CV (A+)   | Web programming (A+)                  |
| DL for 3DCV (A+) | Multimedia security (A+)              |
| DL for HLP (A+)  | Machine learning security (A+)        |
|                  | Cryptography and network security (A) |

### 2014~2019 Pharm.D in Clinical Pharmacy (6 yrs program) GPA 4.06

National Cheng Kung University (NCKU)