



# 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
  - Cython
  - ReactJS
  - 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, Cyber security

## Work experience

### Data Scientist

*aetherAI, Oct. 2021 - (Current)*

### Teaching Assistance (TA)

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

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

### 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 APAC Speaker

Get 3D models out of nothing: Python implementation of deep learning-based 3D models reconstruction from 2D images..

### 2021 PyCon TW 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 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

ICH detection enhanced by asymmetric loss with CNN-LSTM approach.

## 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.

## Education

### 2019~2021 Master of Science (@CSIE CMDM) GPA 4.20

*BEI, 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*

### 2014~2019 Doctor of Pharmacy GPA 4.06

*School of Pharmacy, National Cheng Kung University (NCKU)*

## Publications

Liu, L. C., Ho, M. Y., Su, B. H., Wang, S. Y., Hsu, M. T., & Tseng, Y. J. (2021). PanGPCR: predictions for multiple targets, repurposing and side effects. *Bioinformatics*, 37(8), 1184-1186.

Ho, M. Y., Kuo, M. C., et al. (2021) A step toward practical digital markers for monitoring patients with Parkinson's disease using a deep-learning-based AI-assisted 3D camera system for gait assessment. *Clinical Parkinsonism & Related Disorders*. [under review]

Ho, M. Y., Kuo, M. C., et al. (2021) *Look, Listen, and Diagnose: a deep learning based comprehensive Parkinson's disease evaluation system with 3D point cloud and acoustic features*. [unpublished manuscript]

Ho, M. Y., Kuo, M. C., et al. (2021) *A 2D camera is all you need: gait analysis with frontal-view 2D video by deep learning-based 3D estimation*. [unpublished manuscript]