



# Ming-Yang Ho

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## Summary

A data scientist at aetherAI with 4+ years of experience in 2D/3D computer vision, natural language processing, machine learning, and deep learning algorithms development. Besides, I am also adept at web programming, cryptography, and clinical pharmacy.

## Skills

### - Programming related

- Python
- PyTorch
- C/C++
- ReactJS
- MySQL
- Docker
- Linux
- Git

### - Domain

- Machine learning
- Deep learning
- 2D/3D computer vision
- Natural language processing
- Cyber security
- Computer security

## Language

- Mandarin (native)
- English (TOEIC 825) [2014]
- Japanese (JEPT N1) [2021]

## Interests

Machine learning, Deep learning, Full stack development, Computer 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 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.

### Software Engineer 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

### 2020 HITCON Speaker

Potential Security and Privacy Issues in Novel Taiwanese National eID system

## Awards

### 2022 Best thesis award

### 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. (<https://superbbenchmark.org/>)

### 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 lab) GPA 4.2 (Best thesis award)

Research topic: 3D computer vision, Machine learning, Computer security

Computer Science (bioinformatics specialization)

BEBI, EECS, 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 4.1 (CS-related GPA: 4.3, Outstanding Graduate Award)

Clinical Pharmacy

\*Also got admitted to NTU CSIE.

School of Pharmacy, National Cheng Kung University (NCKU)

## Publications

Ho, M. Y., et al. (2022) Ultra-high-resolution unpaired stain transformation via Kernelized Instance Normalization. [under review]

\*Ho, M. Y., \*Liu, L. C., 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. (\*equal contribution)

Ho, M. Y., Kuo, M. C., et al. (2022) 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. (2022) A 2D camera is all you need: gait analysis with frontal-view 2D video by deep learning-based 3D estimation. [unpublished manuscript]