陳彥合 Yan-He Chen

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EDUCATION

National Taiwan Normal University   *September 2020 - July 2022*
Master of Computer Science and Information Engineering

Kaohsiung Medical University   *September 2014 - June 2018*
Bachelor of Healthcare Administration and Medical Informatics

WORK EXPERIENCE

Delta Electronics, Delta Research Center (DRC)   *January 2023 - Present*
Senior R&D Engineer

- Human-Object Interaction Detection
    - Researched action recognition for human-object interactions, balancing model speed and accuracy.
- Abnormal event detection in factories / Human interaction recognition (human-to-human)
    - Researched multi-person interaction action recognition, including RGB-based and Skeleton-based techniques.
    - Analyzed and optimized the accuracy and inference speed of CNN-based and Transformer-based models.
    - Achieved 30+ FPS, 60 action classes, and 88% average accuracy with a CNN-based action recognition model.
- Gaze Direction and Head Posture for factory personnel.
    - Researched Head Pose Estimation and Gaze Estimation and developed a Python API.
    - Result: accuracy 99%, angle error less than 5 degrees, FPS: 40.
- Human balance detection
    - Researched Pose Estimation and Walking Plan for biped robots, using RGB images for human balance detection.
- Designed Android architecture (MVVM, View/Data Binding, LiveData, Navigation) and developed (Kotlin/Java).
- Use speech synthesis models and speech cloning models to generate sounds and use them in existing products.

National Taiwan Normal University, CSIE   *September 2022 - January 2023*
Research Assistant

- Research self-supervised and Generative models to enhance image recognition with zero-hot learning.
  This work was published in ***Multimedia tools and applications (IF: 3.0) 2024***.

SIDE PROJECT

National Taiwan University   *February 2022 - August 2022*
- Study on Generalized Zero-Shot Learning image recognition, published in ***Multimedia Systems 2024 (IF: 3.5)***.

National Taiwan Normal University   *March 2021 - August 2021*
- Research on zero-shot learning image recognition, published in ***ACM ICMR 2021***.

PUBLICATIONS

Self-Supervised Learning of Pseudo Classes for Generalized Zero-Shot Fine-Grained Recognition
Yan-He Chen and *Mei-Chen Yeh*   *Multimedia Tools and Applications (IF: 3.0) [paper] 2024*

Indirect Visual-Semantic Alignment for Generalized Zero-Shot Recognition
Yan-He Chen and *Mei-Chen Yeh*   *Multimedia Systems (IF: 3.5) [paper][code] 2024*

Weakly- and Semi-Supervised Object Localization
Zhen-Tang Huang, ***Yan-He Chen*** and *Mei-Chen Yeh*   *IEEE ICASSP [paper] 2023*

Text-Enhanced Attribute-Based Attention for Generalized Zero-Shot Fine-Grained Image Classification
Yan-He Chen and *Mei-Chen Yeh*   *ACM ICMR [paper] 2021*