Woan-Shiuan Chien (Winnie)

Doctoral Student, EE, National Tsing Hua University

PROFESSIONAL INTERESTS

Behavioral Signal Processing · Affective Multimedia · Group Interaction Behavior

EDUCATION

2019.09 – now

National Tsing Hua University (NTHU)

PH.D IN DEPARTMENT OF ELECTRICAL ENGINEERING
Behavior Information & Interaction Computation LAB (BIIC Lab)
Advisor: Professor Chi-Chun Lee

2015.09 – 2017.07

National Chung Cheng University (CCU)

M.S IN DEPARTMENT OF ELECTRICAL ENGINEERING
Biomedical Signal Processing & System Design Lab (BSP Lab)
Thesis Advisor: Professor Sung-Nien Yu

2011.09 – 2015.06

Chung Yuan Christian University (CYCU)

B.S IN DEPARTMENT OF ELECTRICAL ENGINEERING
Special Research Topic Advisor: Professor Kang-Ping Lin

WORKING EXPERIENCES

2021.06 – 2021.08

Industrial Technology Research Institute (ITRI)

AI MEDICAL IMAGING ALGORITHM INTERN
• Implement Graph Neural Networks on Electric Health Records

2017.10 – 2019.09

Nuvoton Technology Corporation (Nuvoton Crop.)

MICROCONTROLLER SYSTEM APPLICATION ENGINEER
• Mini-PCIe Expansion Adapter Boards (NB-IoT, LTE, LoRa Gateway)
• Key Word Spotting (Speech Recognition) featuring the NuMicro M480 series microcontroller
• Digital Image Recognition System featuring the NuMicro M480 series microcontroller
• OLED Display with GIF Format Decode featuring the NuMicro M480 series microcontroller

COOPERATED PROJECTS

2021.03 – now

UT Dallas MSP Lab.

• Collect Chinese podcasts to recognize the emotions.

2020.07 – 2021.01

C-Media Electronics Incorporation (C-Media Inc.)

• Implement AI de-reverberation de-noise algorithm based on deep noise suppression.

2020.05 – 2020.11

Institute for Information Industry (III)

• Develop a computer vision-based video retrieval system speeding up the fakenews screening process.
• The system would be deployed by two NGO fakenews checkers Taiwan FactCheck Center and MyGoPen.

PATENTS

2021

Microcontroller updating system and method

Inventor: **Woan-Shiuan Chien**
  - *TW Patent App. TW202123091A*
  - *CN Patent App. CN112925533A*

2020

Recognition system and recognition method

Inventor: **Woan-Shiuan Chien**, Tzu-Lan Shen
  - *TW Patent App. TWI682325B*
  - *US Patent App. US20200160179A1*
  - *CN Patent App. CN111292764A*

HONORS & AWARDS

2022   **SCHOLARSHIP**, Rotary Education Scholarship

2021   **SCHOLARSHIP**, Cathay Life Insurance Scholarship
        SCHOLARSHIP, Shin Kong Life Insurance Scholarship

2016   **SCHOLARSHIP**, Nuvoton Crop. Scholarship
        SCHOLARSHIP, Cathay Life Insurance Scholarship

INVITED TALKS

2019   **Industrial Technology Research Institute (ITRI)**
        Nuvoton Microcontroller Development, Implementation and Design for Smart Image Recognition

TEACHING EXPERIENCES

2020   **National Tsing Hua University**

        TEACHING ASSISTANT
        • 10910 EE 6640 Digital Signal Processing Laboratory

2016   **National Chung Cheng University**

        TEACHING ASSISTANT
        • 10510 EE 4156114 Biomedical Signal Processing
        • 10510 EE 4151004 Introduction to Computers
        • 10420 EE 4153013 Digital Signal Processing Laboratory
        • 10420 EE 4153213 Introduction to Digital Signal Processing

PUBLICATIONS

GOOGLE SCHOLAR PROFILE: `https://scholar.google.com.tw/citations?user=udbwr2sAAAAJ&hl=zh-TW&authuser=1`

M.S Thesis

"Back-propagation and Convolutional Neural Networks for Arrhythmia Electrocardiogram Classification", National Chung Cheng University, July 2017.
以倒傳遞及卷積神經網路辨識心律不整心電圖之研究, 中正大學電機系, 2017年7月

International Conference

[1]   **Woan-Shiuan Chien**, Huang-Cheng Chou, Chi-Chun Lee "Self-assessed Emotion Classification from Acoustic and Physiological Features within Small-group Conversation" in *Companion Publication of the 23rd ACM International Conference on Multimodal Interaction (ICMI '21), 2021.*

[2]   **Woan-Shiuan Chien**, Huang-Cheng Chou, Chi-Chun Lee "Belongingness and Satisfaction Recognition from Physiological Synchrony with A Group-Modulated Attentive BLSTM under Small-group Conversation" in *Companion Publication of the 23rd ACM International Conference on Multimodal Interaction (ICMI '21), 2021.*

[3]   Huang-Cheng Chou, **Woan-Shiuan Chien**, Chi-Chun Lee, ""Does it Matter When I Think You Are Lying?" Improving Deception Detection by Integrating Interlocutor's Judgements in Conversations.", in *Findings of the Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (ACL-IJCNLP '21), 2021, Virtual Event.*
Merry Electronics Thesis Award Candidate

[4]   **Woan-Shiuan Chien**, Hao-Chun Yang, Chi-Chun Lee, "Cross Corpus Physiological-based Emotion Recognition Using a Learnable Visual Semantic Graph Convolutional Network.", in *Proceedings of the 25th ACM International Conference on Multimedia (MM '20), 2020, Virtual Event.*
EI, acceptance rate: 27.8 % only

[5]   **Woan-Shiuan Chien** and Sung-Nien Yu. "Identification of Myocardial Ischemic and Infarction Episodes Based on ST Level and Beat Type Re-attribution Method." in *Proceedings of the 2nd International Conference on Biomedical Signal and Image Processing (ICBIP '17) 2017.*