



Yu-You Liang
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Address
Hsinchu City
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Yu-You Liang

Software Engineer

About me I am an Engineer at AUO Corporation with extensive experience in acoustic signal processing, deep learning, embedding system, and system development. Demonstrated capability in projects ranging from voice enhancement algorithms to object detection systems. Have a positive attitude towards work. Strong communication skills honed through diverse academic and professional engagements.

Education

2017 - 2020, Yuan Ze University

Master of science in Electrical Engineering

2013 - 2017, Yuan Ze University

Bachelor of science in Electrical Engineering

2010 - 2013, National Hsinchu Senior High School

Experience

July 2021 – present, *Senior Engineer, Display Technology Development Department*, AUO Corporation

- EEG and PSG real time detect edge device control using Arduino
- Sleep stage detect using EEG and PSG signal
- Effect of micro LED in changing wavelength or FWMH
- Develop an auto light up system on cholesteric liquid crystal display
- Develop and maintain the system artificial intelligence fence
- Construct and maintain a clear motion ratio measure system

Sep 2020 – April 2021, *Research Assistant, Wireless Mobile Computing Lab, Yuan Ze University Department of Electrical Engineering*

- Voice activity detection using Doppler radar
- Develop an adaptive decentralized multi-channel speech enhancement system combined with the speaker positioning of the Doppler radar
- Develop an adaptive single-channel speech enhancement system that combines the lip motion characteristics of the Doppler radar

Sep 2017 - July 2020, *Part-time Research Assistant, Biomedical Acoustic Signal Processing Lab, Academia Sinica*

- Distributed Microphone Speech Enhancement based on Deep Learning

Sep 2018 - Jan 2019, *Teaching Assistant, Discrete Signal Processing, Yuan Ze University Department of Electrical Engineering*

- Wiener filter, Least mean squares filter, Pathological voice detection

Sep 2018 - Jan 2019, *Teaching Assistant, Data Structure, Yuan Ze University Department of Electrical Engineering*



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Paper achievement

2018, *Oral Presentation*

Yu Taso, Shih-Chun Yeh, Yu-You Liang, Chu-Hsuan Wang and Shih-Hau Fang, " Subcarrier Selection for Efficient CSI-based Indoor Localization," ICACAR, Feb., 2018

2021, *Second author, Contributing*

Speech Enhancement with Distributed Microphones.

Software Development Skills

Programming

- C/C#
- Python
- Matlab

Projects

2022-2023, *auto light up system on cholesteric liquid crystal display*

Control 4 mode of light up ways to fit the auto-measurement require.

- UI
- SPI
- C#

2021-2023, *artificial intelligence auto alarm fence*

Automatically alarm of illegally placed staffs in the factory by using object detection algorithms on camera images.

- YOLO v5
- RTSP
- API connect

2021-2023, *Effect of micro LED in changing wavelength or FWHM*

Changing the LED's wavelength and FWHM through bin mixing to make the color difference lower pixel by pixel.

- dE 2000
- Spec to CIE1931 XYZ
- cover rate

2021-2022, *Real time sleep stage detect system using EEG and PSG signal*

Intrgrate EEG sensor and PSG sensor to a real time sleep stage detect system.

- embedding system
- RTOS
- SPI,I2C.UART

2020-2021, *voice activity detection system using mmWave radar*

I use FMCW signal's phase difference to detect the voice activity through the vibration of vocal cord.

- radar
- signal processing

2018-2020, *Speech Enhancement with Distributed Microphones*

I proposes improved speech-enhancement systems in distributed microphone networks, and then investigates the effectiveness of three different model structures.

- deep learning
- speech enhancement



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2017-2018, *heart disease classification using single lead ECG*

I use deep neuron network to analysis the single lead ECG and classify several heart diseases.

- deep learning
- classification

2017-2018, *Learning Transportation Modes from Smartphone Sensors Based on Deep Neural Network*

I use DNN and GAN to analysis the data of Accelerometer, Magnetometer and Gyro to classify the transportation modes.

- deep learning
- classification
- feature extraction

2016-2017, *Pathological voice detection and classification*

I use SVM,DT and deep neuron network to detect and classify the pathological voice

- deep learning
- classification
- MFCC

Interests

Professional

Data analysis, Discrete Signal Processing, Deep Learning, Acoustic Signal Processing, Algorithm

Personal

Piano, basketball(school team), baseball, dancing, guitar

References

Shih-Hau, Fang

- Professor,IEEE Senior Member
- Yuan Ze University - 135 Yuan-Tung Road, Chung-Li 32003, Taiwan
- shfang@saturn.yzu.edu.tw
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- Postdoctoral researcher
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