Kuan-Hung Chen

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Education

2020 – Now **National Tsing Hua University**, *M.S. in Electrical Engineering*.
Advisor: Prof. Min Sun (VSLab)

2017 – 2020 **National Tsing Hua University**, *B.S. in Electrical Engineering*.
GPA: 3.90/4.30 (Overall), 3.94/4.30 (Major)
Ranking: 18/61, 36/112

2016 – 2017 **National Central University**, *Dept. of Computer Science*.
Transferred to National Tsing Hua University at Sept. 2017

Experience

Summer 2020 **National Tsing Hua University Vision Science Lab**, *Hsinchu*, Taiwan.
- Participating in CarePLUS.ai, an AI-assisted home care system project.
- Worked on AI model training and pipeline integration.
- Developed several privacy-preserving image visualization algorithms.

2019 – 2020 **Edony A.I. (startup)**, *Taipei*, Taiwan.
- Worked on vision-based liquid level tracking algorithms.
- Proposed a method for monitoring the change of frozen liquid in factories.

2018 – 2019 **National Tsing Hua University Vision Science Lab**, *Hsinchu*, Taiwan.
- Worked on tiny object detection in aerial images.
- Worked on human action/event prediction in virtual environment.

Projects

2019 – Now **Awesome Tiny Object Detection**
A curated list of awesome papers, datasets, surveys and articles for tiny object/face/pedestrian detection. Starred by 180+ and forked by 30+ GitHub users worldwide. [link]

Spring 2020 **Remove the People: Segmentation-Based Object Removal**
A two-stage object removing algorithm which first generates segmentation mask by filter-based method, then remove objects in images by seam carving technique. [report]

Spring 2020 **Compiler Implementation**
A simple compiler implementation which targets on subset of C language and generates RISC-V assembly code. Includes lexical analyzer, syntax analyzer and code generator. [link]

Fall 2019 **Operating System Engineering**
An OS thread package, targeting at Edsim51 simulator, which supports thread creation, cooperative switching, preemptive switching and termination. [link]

Spring 2019 **Predict Flue-Gas Desulfurization using Random Forest Classifier**
A classification mechanism for predicting Flue-Gas Desulfurization level based on scikit-learn's RandomForestClassifier. Ranked 1st out of 9 teams.

Patents

March 2020 **Measuring device**
A device which tracks liquid level, containing a webcam, a motor, an NVIDIA Jetson Nano and other elements. Work done during the internship at Edony A.I. [link] [Espacenet] [demo]

Relevant Coursework

Undergraduate

Algorithms, Data Structures, Operating Systems, Computer Architecture, Compiler Design, Intro. to Computer Networks, Intro. to Digital Signal Processing

Graduate

Machine Learning, Computer Vision

Skills

Programming	Python, C++, C
Software	Git, Vim, PyCharm, Visual Studio Code
Languages	Chinese (native), English (conversational), Korean (beginner)