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 250+ and forked by 50+ 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)