

## Technical skills

<b>Domain Knowledge</b>	Embedded platform development, Low-level system software, Processor benchmark analysis, Power modeling
<b>Programming Languages</b>	C, Bash, python, verilog
<b>Tools</b>	GDB, Perf, Ftrace, Gem5, ARM-Streamline, ARM DS-5, Oscilloscope

## Work Experience

<b>Realtek Semiconductor Corp.</b> <i>System Design Engineer</i>	2023 Oct - Present Hsinchu, Taiwan
<ul style="list-style-type: none"><li>• Focus on the build CPU power model with linux kernel thermal framework.</li><li>• Benchmark analysis for CPU power(static power and dynamic power) and performance.</li><li>• The validation of SoC's Modules(I2C, Thermal sensor, Crystal oscillator analysis) functionality and stability.</li><li>• Experienced with profiling CPU(ARMv8) performance by ARM streamline.</li><li>• Survey ARM-based Mali GPU power model.</li></ul>	

## Study Project

<b>System performance: Enterprise and the Cloud</b> <i>Profiling tool, Workload analysis, Visualizations, perf</i> Learned CPU architecture and CPU profiling methodology.	Spring 2024 Study project
<b>Gem5: Two level cache architecture</b> <i>Computer architecture, Profiling, Workload analysis</i> Learned Computer architecture with Gem5 system modeling tool.	Spring 2024 Side project
<b>RL DVFS</b> <i>PMU, DVFS, Q-learning, Tegra system</i> Learned DVFS and Q-learning, and combine both of them by some energy saving strategy.	Fall 2022 Side project

## Master thesis

<b>Title</b> : Optimized Fruit Harvesting System for UAVs based on Dynamic Frequency Scaling
<b>Abstract</b> : This paper aims to balance embedded device performance and power consumption using Dynamic Frequency Scaling (DFS). It applies the YOLOv4-tiny object tracking algorithm to drone-assisted fruit harvesting for visual recognition. The study discusses DFS principles, advantages, and implementation on embedded devices. A DFS-based harvesting system is designed, encompassing drones, embedded devices, and software architecture. Dynamic CPU frequency adjustments enable balanced control over performance and power consumption.
<b>Skill</b> :DVFS, image recognition, computer architecture, PMU(Performance Monitoring Unit), Linux kernel
<b>Language</b> : Python, C/C++, Bash

## Education

<b>Master of Electrical Engineering</b> <i>Master's degree program</i> Course: <b>Micro-controller</b> , <b>VLSI</b> , <b>ADIC</b> , <b>CV</b> (computer vision), <b>ML</b> (machine learning)	National Chung Cheng University 2020 Sep - 2023 Jul
<b>Bachelor of Electrical Engineering</b> <i>Bachelor's degree program</i> Major: Automatic control	Chung Yuan Christian University 2016 Sep - 2020 Jun