
SKILLS

- **Programming languages:** C(3-4 years), C++(1-2years), Python(1-2 years)
- **Tools:** GDB, UART, Logic analyzer, ICE, JTAG, Pytorch, Numpy, VSCode, Git, Script, QEMU, Ubuntu
- **Knowledge:** Firmware development, Operating system, Real-time operating system, Memory architecture, Object-oriented programming, Scheduling algorithms, Signal processing algorithms, Debugging

WORK EXPERIENCE

- **Silicon Motion Technology Corporation** Hsinchu, Taiwan
SSD firmware Engineer May. 2020 – Nov. 2022
 - Solve issues from internal tests and customer tests.
 - Program and erase fail handling verification. (Kingston NV2 (PCIe))
 - Read, Raid, and Debug flow presentation. (Kingston NV2 (PCIe))
 - RAID engine validation and MPISP (boot code) verification on FPGA. (IC: SM2259XT3)
 - Turbo RAID implementation and verification (**rescue 6 planes retention data**). (Crucial BX500 (SATA))
 - RDT(Reliability Demonstration Test) maintenance and development. (Crucial BX500 (SATA))
 - Tools: C, UART, ICE, JTAG, Logic analyzer, RTOS

ACADEMIC EXPERIENCE

- **University of Utah** Salt lake city, Utah, USA
Teaching Assistant - Probabilistic machine learning Jan. 2024 – Apr. 2024
 - Release, grade assignments and office hours
- **University of Utah** Salt lake city, Utah, USA
Research Assistant – Independent study ([link](#)) Aug. 2023 – May. 2024
 - Topic: Fractional Fourier neural operator(FrFNO) on partial differential equations
 - Author: **Su-Wei Yang**
 - Result: **92%(1D dataset), 55%(2D dataset), and 27%(3D dataset)** less error than FNO vanilla;
36%(1D dataset), 21%(2D dataset), and 16%(3D dataset) less error than full mode FNO.
 - Tools: Python, Deep learning, Signal processing, Numerical methods, Non-stationary random fields
- **National Taiwan University of Science and Technology** Taipei, Taiwan
Teaching Assistant - Embedded System software design Mar. 2018 – Jun. 2018
 - Design, assess, and grade students' exams and projects
- **Papers** Sep. 2017 – Aug. 2019
 - Topic: GPU Swap-aware Scheduler virtual memory management for GPU applications
 - Authors: **Su-Wei Yang**, Zhao-Wei Qiu, Ya-Shu Chen
 - Result: Improve **16%** performance in real cases.
 - Conference: 2020 ACM/SIGAPP Symposium On-Applied Computing
 - Tools: C++, Memory architecture, Scheduling algorithms
 - Topic: Energy-Efficient Task Offloading for Time-sensitive Application in Fog Computing
 - Authors: Yu-Lin Jiang, Ya-Shu Chen, **Su-Wei Yang**, Chia-Hsueh Wun
 - Journal: IEEE System Journal
 - Tools: C++, Python, Scheduling algorithms, Embedded system

EDUCATION

- **University of Utah** Salt lake city, Utah, USA
Master of Science in Computer Science Jan. 2023 – Dec. 2024
- **National Taiwan University of Science and Technology** Taipei, Taiwan
Master of Science in Electrical Engineering Sep. 2017 – Mar. 2020
- **RWTH Aachen University** Aachen, Germany
Exchange student in Electrical Engineering Oct. 2019 – Mar. 2020
- **National Taiwan University of Science and Technology** Taipei, Taiwan
Bachelor of Science in Electrical Engineering Sep. 2013 – Jun. 2017

COURSES

- **Courses:** Artificial Intelligence, Advanced Operating System, Computer Architecture, Embedded system software design, Nature Language Processing, Operating System, Probabilistic Machine Learning, RTOS, Software Verification