

SUMMARY

An engineer passionate about building cutting-edge products, exploring novel fields, and working collaboratively in teams. With 2.5 years of experience in firmware development across multiple teams and 1 year in deep learning research, my expertise includes firmware design, operating systems, deep learning, and algorithm development. I am eager to join a team where I can engage with new technologies and contribute to creating impactful products.

SKILLS

- **Programming languages:** C(work proficiency), Verilog, C++, Python
- **Tools:** GDB, UART, Logic analyzer, ICE, JTAG, VSCode, Git, Script, QEMU, Ubuntu
- **Knowledge:** Firmware development, IC design flow, Operating system, Deep learning, Algorithm design, Debugging

WORK EXPERIENCE

- **Silicon Motion Technology Corporation** Hsinchu, Taiwan
SSD firmware Engineer May. 2020 – Nov. 2022
 - Solve issues from internal and customer tests with different teams.
 - Program and erase fail handling verification. (Kingston NV2 (PCIe))
 - Code flow introductions to other firmware teams. (Kingston NV2 (PCIe))
 - RAID engine and boot code verification on FPGA with hardware teams. (IC SM2259XT3)
 - Turbo RAID implementation with various teams (**rescue 6 planes from QLC nand**). (Crucial BX500 (SATA))
 - Reliability development test maintenance and development. (Crucial BX500 (SATA))
 - Skills: C, UART, ICE, JTAG, Logic analyzer, Firmware development

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
 - Result: **92%(1D dataset), 55%(2D dataset), and 27%(3D dataset)** less error than FNO vanilla
 - Skills: 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:([link](#)) 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
 - Skills: 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
 - Skills: 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