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SKILLS

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- **Programming languages:** C(3-4 years), C++(1-2 years), 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

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WORK EXPERIENCE

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- **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

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ACADEMIC EXPERIENCE

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- **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

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EDUCATION

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- **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

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COURSES

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