SUWEI YANG
Personal website

Email :u1429034@umail.utah.edu
Mobile : 0935882687

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, Assembly
- **Tools**: GDB, UART, Logic analyzer, ICE, JTAG, Modelsim, VSCode, Git, Script, QEMU, Ubuntu
- **Knowledge**: Firmware development, VLSI Design, OS, RTOS, 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 13. 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