Shaofeng Wu

Email: sfwu22@cse.cuhk.edu.hk
Mobile: +852-63118014
Github: github.com/ShaofengWu123

Education

- **Chinese University of Hong Kong(CUHK)** — Hong Kong, China
  Doctor of Philosophy in Computer Science and Engineering — Aug 2022 - June 2026(expected)
- **University of Science and Technology of China(USTC)** — Anhui, China
  Second Bachelor of Engineering in Computer Science and Technology; GPA: 3.71/4.30 — July 2020 - June 2022
- **University of Science and Technology of China(USTC)** — Anhui, China
  Bachelor of Natural Science in Material Physics; GPA: 3.76/4.30 — July 2016 - June 2020

Skill Set

- **Languages**: Chinese(native), English(fluent)
- **Programming**: C, Python, Verilog
- **Platforms**: Linux

Projects

- **SmartNICs/DPU**, CUHK, NetX Lab — 2022-Now
  SmartNIC/DPU provide abundant opportunities to accelerate data center workloads, e.g. NFV and microservices. My current poroject focuses on supporting SmartNIC/DPU as part of data center infrastructure.
- **Reliable NVMe Driver**, MSRA IEG — 2021-2022
  Reliable NVMe Driver offers a light-weighted, kernel space solution for auto fail-over in public cloud based on linux platforms. It enables failure-recovery mechanism that deals with both soft crash and hardware crash transparently for cloud users. Compared with traditional device failure solutions(e.g. physical device removal, resetting) that public cloud administrators rely on, Reliable NVMe Driver works with RackOS and high-speed PCIe switch to fix device failures and resume device automatically and efficiently. In our prototype cloud system, Reliable NVMe Driver reaches 51 ms stand-alone recovery latency and 763.5ms cooperative recovery latency during a device fail-over process, with no obvious performance loss compared with Linux native NVMe driver.

Work Experience

- **Research Intern**, Microsoft Research Asia, Shanghai — 2021-2022, Remote & Onsite, Full-time
  Project: Reliable Driver — *Mentor: Shuotao Xu,*
  - **Research topics**: Reliable linux driver for systems based on resource disaggregation and hardware virtualization.
  - **Reliable NVMe driver**: Co-designed with Dr.Shuotao Xu and implemented the reliable NVMe driver as a linux module.
  - **System prototype**: Constructed the prototype testbed system(RackOS). Implemented RPC API and recovery protocol for driver deployment and metrics. Achieved auto failover with satisfactory latency of 763.5ms.
- **Research Intern**, The University of Texas at Austin, Austin, TX — Summer 2019, Onsite, Full-time
  Project: Solar Steaming Device — *Supervisor: Donglei Fan, July 2019 - Sep 2019*
  - **Research topics**: Bio-inspired artificial heliotropical solar steaming device based on stimuli-responsive polymer actuator.

Teaching

- **Teaching Assistant** — Onsite
  CSCI3150 Introduction to Operating Systems — CUHK 2023 Spring, Class Size: 80
- **Teaching Assistant** — Onsite
  003044.01 Physical Chemistry Experiment — USTC 2019 Fall, Class Size: 20
- **Teaching Assistant** — Onsite
  022164 College Physics Experiment III — USTC 2019 Spring, Class Size: 10

Honors and Awards

- Outstanding Graduates Award in USTC - June, 2020
- Outstanding Graduation Thesis in USTC - June, 2020
- Outstanding Undergraduate Scholarship in USTC (4%) - 2017, 2018, 2019