

YIWEI YANG

✉ victoryyang00@ucsc.edu · 🌐 asplos.dev 🐙 victoryyang00

EDUCATION

UC Santa Cruz, Ph.D. Student 08/2022 – 06/2028

- Major: Computer Science, advised by Andrew Quinn. 22 Fall TA of Computer Architecture

ShanghaiTech University, Undergraduate 09/2018 – 06/2022

- Major: Computer Science, finished Compiler, Network, Database, OS, CA, Convex, RL, Parallel Computing. 21&22 Spring TA of Compiler

WORK EXPERIENCE

Jump Trading, Shanghai, China 07/2020 – 09/2020

(Linux Team) Production Engineer Intern

- High Frequency Trade Order Book simulation applying Linear Regression Method.
- Designed a user interface to automate the core affinity of jobs.
- Designed an eBPF exporter of GPFS full OSS lifetime traces for better reporting the bottleneck.

RESEARCH EXPERIENCE

Storage Systems Research Center, UC Santa Cruz 08/2022 – Present

(Graduate Research) Assistant

- Understand the performance characteristics of CXL.mem systems. Data-driven far memory allocation, prefetching, and replacement policies.
- Make Hardware Software Co-design for on CXL.cache data movement
- Make Virtual Machine migration based on WebAssembly and WASI

PUBLICATIONS

”CXLMemSim: A pure software simulated CXL.mem for performance characterization.” Yarch23 Yiwei Yang Pooneh Safayanikoo, Jiacheng Ma, Tanvir Ahmad Khan, Andrew Quinn.

”Attack as Defense: Characterizing Adversarial Examples using Robustness.” ISSTA21 Zhao, Zhe, Guangke Chen, Jingyi Wang, Yiwei Yang, Fu Song, and Jun Sun.

PORTFOLIOS

ChocoPy Compiler <https://github.com/chocopy-llvm/chocopy-llvm> A compiler to LLVM IR and to riscv assembly of python 3.6 subset as

ShanghaiTech Compiler class project

IORing Rust <https://github.com/LemonHX/ioring-rs> IORing Rust for windows, support monoio

MVVM <https://github.com/Multi-V-VM/MVVM> Live migration over WebAssembly with WASI support

Bede-linux <https://github.com/SlugLab/Bede-linux> Per Process RSS Node Limit Linux kernel for CXL

OpenCopilot <https://github.com/eunomia-bpf/OpenCopilot> Open source implementation of Windows Copilot for system maintainance

SKILLS

- **Programming Languages:** not limited to any specific language, and experienced in Python/C++/Rust, comfortable with Golang/C/Java/Scala/TypeScript (in random order).
- **System:** Specialist in Compiler & Performance Analysis, familiar with LLVM, MLIR, Linux, eBPF
- **Machine Learning:** familiar with general knowledge of machine & reinforce learning.

MISCELLANEOUS

- Interests: Computer Architecture, Storage System, Formal Methods, etc.
- Awards:
 - Lead GeekPie_HPC *Ranked 2*, SC-SCC21. *Ranked 4*, ISC22. Advise Not-Slow-Slug *Ranked 2*, ISC23.
 - As a member of 0x238e *Best award*, Bitrun, Hang Zhou, 2019.
 - *Second Award*, Shanghai CTF invitation competition, 2019.