Yiwei Yang

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EDUCATION

UC Santa Cruz, Ph.D. Student   08/2022 – 06/2028
- Major: Computer Science, advised by Andi 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

Oxmiq Labs, Campbell, CA   06/2025 – Present

(Compiler Engineer)   Compiler Engineer Intern
- Applied HetGPU into Production.

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

- Data-driven CXL.mem allocation, prefetching, and replacement policies Operating System.
- Make Hardware Software Co-design for on CXL.cache data movement
- Make universal migration based on WebAssembly and PTX $\overset{\text{MV}}{\text{VM}}$
- Make cross kernel-userspace eBPF observation for distributed system

SELECTED PUBLICATIONS

"eGPU: Extending eBPF Programmability and Observability to GPUs" HCDS25 **Yiwei Yang**, Tong Yu, Yusheng Zheng, Andi Quinn.

"HetGPU: The pursuit of making binary compatibility towards GPUs" Preprint **Yiwei Yang**, Yusheng Zheng, Tong Yu, Andi Quinn.

"Extending Applications Safely and Efficiently" OSDI25 Yusheng Zheng, Tong Yu, **Yiwei Yang**, Yanpeng Hu, Xiaozheng Lai, Dan Williams, Andi Quinn.

"Transparent and Efficient Live Migration across Heterogeneous Hosts with Wharf" Preprint **Yiwei Yang**, Aibo Hu, Yusheng Zheng, Brian Zhao, Xinqi Zhang, Andi Quinn

"CXLMemSim: A pure software simulated CXL.mem for performance characterization." Yarch23 **Yiwei Yang** Pooneh Safayenikoo, Jiacheng Ma, Tanvir Ahmad Khan, Andi Quinn.

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`, `Gem5`, `WASM`, `gdb`, `eBPF`, `ptx`, `qemu`, `chisel`, `Linux mm & observability subsystem`.
- **Machine Learning**: familiar with general knowledge of machine & reinforce learning, interested of System for LLM for Sys.

MISCELLANEOUS

- Interests: HPC, Architecture, Security, JIT, CXL, LLM4Sys4LLM, etc.
- Lead GeekPie_HPC *Ranked 2*, SC-SCC21. *Ranked 4*, ISC22. Advise Not-Slow-Slug *Ranked 2*, ISC23.
- Advise Kiki Zhang, Zhen Cao to be Ph.D. students.
- Google Summer of Code Mentor for BPFTime