YIWEI YANG

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EDUCATION

ShanghaiTech University, Undergraduate   09/2018 – 06/2022
- Major: Computer Science, finished Compiler, Network, Database, OS, Convex, RL, Parallel Computing.

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

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.
- Applied salt and jinja to automate scheduling of jobs and assigning affinity of cpu cores in Linux DevOps.
- Applied gobidng of gobpf to try IOVisor stuff.

RESEARCH EXPERIENCE

System Lab, ShanghaiTech University   07/2019 – 06/2020
(Undergraduate Research)   Intern
- Zhao, Zhe, Guangke Chen, Jingyi Wang, **Yiwei Yang**, Fu Song, and Jun Sun. "Attack as Defense: Characterizing Adversarial Examples using Robustness." .
  A2D uses the cost of attacking an input for robustness evaluation and identifies those less robust examples as adversarial since less robust examples are easier to attack.
- Yuchen Liu, Yixuan Meng, **Yiwei Yang**, Kaiyuan Xu, Zijun Xu, Tianyuan Wu, Shu Yin. "Critique of "MemXCT: memory-centric X-ray CT reconstruction with massive parallelization" by SCC Team from ShanghaiTech University." .
- Researching MOVE language in Libra currency source code to protect against Arithmetic Overflow, Timestamp Difference.
- Understanding the real access mechanism of Memory Mode Optane Memory and XPBuffer by reverse-engineering methods.

Darko Marinov's Lab, University of Illinois at Urbana-Champaign   07/2021 – 10/2021
(Research Experience for Undergraduate)   Remote Program
- Investigating Order dependent Flacky Tests by Dynamic Taint Analysis and try to fix the underlying concurrent bugs.

PORTFOLIOS

Pint OS (Rust)   https://github.com/victoryang00/PintOS

A Stanford based Tiny x86 single thread multi process Operating System and WIP rust ABI   Implemented Thread, User Program (Argument Passing) Virtual Memory and File System.

Cuckoo Hashing   https://github.com/victoryang00/CuckooHashing

A Novel Hash method using GPU   Implement full two table cuckoo Hash table using CUDA intrinsic.

ChocoPy Compiler   http://s3l.shanghaitech.edu.cn:8081/yangyw/chocopy

A compiler to LLVM IR and to riscv assembly of python 3.6 subset as ShanghaiTech Compiler class project

SKILLS

- **Programming Languages**: not limited to any specific language, and experienced in Python/Golang, comfortable with Rust/C/C++/Java/Scala/TypeScript (in random order).
- **System**: familiar with `LLVM`, `Linux perf`, `eBPF`, `Soot`, `Gem5`
- **Machine Learning**: familiar with general knowledge of machine & reinforce learning.

MISCELLANEOUS

- Interests: Computer Architecture and System, Software Engineering.
- Awards:
  - Lead GeekPie_HPC *Ranked 2*, SC-SCC21. *Ranked 8*, ISC21.
  - As a member of 0x238e *Best award*, Bitrun, Hang Zhou, 2019.
  - *Second Award*, Shanghai CTF invitation competition, 2019.
- opensource: collective_profiler redsocks, PR in Flaky Tests