Chih-Hsuan Yang (楊志璿)

Container Security Researcher • SDET • RD

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Education

National Sun Yat-sen University (NSYSU)   *Kaohsiung, Taiwan*
B.S. in Computer Science and Engineering   *Sep. 2018 - Jun. 2022*

- Awardee of scholarships by information security
- MOST Research Grant for Undergraduate Students 獲科技部大專學生研究計畫補助
- **Best Paper Award:** The Container Security in Healthcare Data Exchange System

Information Security Lab (NSYSU)   *Kaohsiung, Taiwan*
Researcher   *Jul. 2019 - Jun. 2022*

Projects

Django renderer in C++   *GitHub*
Author   *Fall 2022, present*

- A Django language supporting renderer in **C++20**
- Using **co-routine**, **conan**, **boost**, **CMake**
- Familiar with **Functional programming**, **Serialization**
- https://github.com/25077667/Django_cpp

Facebooc   *GitHub*
Main developer/Leader   *Apr 2022, present*

- A Facebook implementation in **GNU C11**
- Familiar with **Copy-on-Write**, **aio**, **SOLID** pattern, **madvice**, **zero-copy** in C
- Familiar with **gdb**, **Address sanitizer**, **Valgrind** in debugging
- Familiar with **GNU Makefile**, **GitHub CI** to build and release
- https://github.com/25077667/facebooc

TCP-over-DP
Maintainer   *Jun 2022, present*

- Implement TCP over UDP in **Modern C++20**
- Familiar with **template meta-programming**, **zero-copy**, **SSO**, **Object compile time optimization**
- Familiar with **Virtual table**, **RAII**, **pImpl** …for **C++ internal**
- Familiar with **Timerfd** in Linux
- Familiar with **CMake** to build and release
- https://scc-net.tw

The Container Security in Healthcare Data Exchange System   *National Sun Yat-sen University (NSYSU)*
Main developer/Leader   *Feb 2021, present*

- **Best Paper Award in CISC2022**
- Bachelor's degree graduation project
- Using **eBPF**, **seccomp**
- Familiar with **cgroup**, **namespace**, **LSM**, **seccomp** in Linux
- https://github.com/25077667/Container_Security/

High Scalability Wireguard VPN Server   *National Sun Yat-sen University (NSYSU)*
Maintainer   *Apr 2021, Jun 2021*

- Using docker swarm to connect containers in different hosts
- Cost $1000 NTD in hardware to serve over **5000** clients **concurrently**
- Using **Prometheus**, **Grafana**, **Wireguard**, **Docker-compose**, **fail2ben**, **ufw**
- https://github.com/25077667/scalable_wg

Skills

General	Modern C++(17), Modern C(11), Python 3, Golang, Shell script, LaTeX
DevSecOps	GitHub Action, Nginx, Docker, Jenkins, Prometheus
Linux	Container, seccomp, LSM, Crontab, UFW, System Programming
Languages	Mandarin (native), English (TOEFL iBT 55), Taiwanese

Work Experience

Engine Team, TeamT5
Taipei, Taiwan

RESEARCHER AND DEVELOPER
Oct. 2022 - present

- Shoving in my **first** commit right before hitting **5 hours** from onboarding
- Requested **4** merge requests in the **first week**
- Improved over **2x performance** of fundamental routine

Department of Computer Science and Engineering, NSYSU
Kaohsiung, Taiwan

OPERATING SYSTEM TEACHING ASSISTANT
Feb. 2021 - Jun. 2022

Familiar with **Booting process** form **BIOS** and from **process**, **sched_entity**

Information Security Club, NSYSU
Kaohsiung, Taiwan

CLUB'S FOUNDING PRESIDENT
Sep. 2019 - Jun. 2021

- R&D, Server Maintainer
- Teaching, Communicator
- Leaded club growing to **100 people**

Campus Dormitory Promote Association (CDPA), NSYSU
Kaohsiung, Taiwan

NETWORK MANAGER
Sep. 2019 - Jun. 2020

- Network manager, R&D

Telecom Technology Center
Kaohsiung, Taiwan

INFORMATION SECURITY ENGINEER INTERN
Jun. 2019 - Aug. 2019

- Develop automatic apk vulnerability detection tool chain.
- Study static analysis tool which look for bugs in Java code.(SpotBugs)
- Familiar with **shell script**, **reverse engineering**

Writing

The Linux Kernel Module Programming Guide
GitHub

CONTRIBUTOR

- The Linux Kernel Module Programming Guide (updated for 5.x kernels)

Debian Reference
Debian Salsa

CONTRIBUTOR

- This Debian Reference is intended to provide a broad overview of the Debian system as a post-installation user's guide.

Mathematics: Science or Pseudoscience?

AUTHOR
May, 2022

- A brief survey if Mathematics is science or pseudoscience.