Chih-Hsuan Yang (楊志璿)

CONTAINER SECURITY RESEARCHER • DEVSECOPS

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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 Nominating:** The Container Security in Healthcare Data Exchange System

Information Security Lab (NSYSU)   *Kaohsiung, Taiwan*

RESEARCHER   *Jul. 2019 - Jun. 2022*

Projects

Facebooc   *GitHub*

MAIN DEVELOPER/LEADER   *Apr 2022, present*

- A Facebook implementation in GNU C
- Key skills:
    - AIO: epoll, mmap, multi-thread(Implementing)
    - Zero-copy: splice(Implementing)
    - Design pattern: Singleton, Factory, SOLID, Object pool, RAII etc.
    - Data Structure and Algorithm: RBtree, Splay tree(Removed), Hash map, boyer moore etc.
    - Cache friendly: Page mamagement, DOD(Designed. Might implement in next version), special data structure
    - CI/CD: GitHub Action, docker-compose, reverse proxy, TDD(implementing)
    - HTTP from from scratch
    - Security: OWASP top 10(implementing)
    - Debugging: macro, sanitizer, GDB
- https://facebooc.scc-net.tw

My Home Cloud

MAINTAINER   *Jun 2021, present*

- A cloud can fully replace Google
- My content searchable distributed academic library
- 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 Nominating**: Result would come out in 06/16/2022
- Bachelor's degree graduation project
- https://github.com/25077667/Container_Security/

MITM integration   *National Sun Yat-sen University (NSYSU)*

MAINTAINER   *Jan 2022*

- An integration of Man-in-the-middle attack package
- Figure out victims accounts and passwords in real time
- https://github.com/25077667/Man-in-the-Middle-Attack

High Scalability Wireguard VPN Server   *National Sun Yat-sen University (NSYSU)*

MAINTAINER   *Apr 2021, Jun 2021*

- Use docker swarm with Heidi Cheng
- Cost $1000 NTD in hardware to serve over 5000 clients concurrently
- https://github.com/25077667/scalable_wg

NSYSU reCAPTCHA Solver

DEVELOPER

- Use CNN recognizor with Ernest Chu
- https://github.com/25077667/nsysu-captcha-solver

NTRU Booster on FPGA

DEVELOPER

- Use NTT twiddle factor with Max Hsu, who is a SiFive intern of system software
- Research at the same time: Paper

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

Department of Computer Science and Engineering, NSYSU

Kaohsiung, Taiwan

OPERATING SYSTEM TEACHING ASSISTANT

Feb. 2021 - Jun. 2022

Information Security Club, NSYSU

Kaohsiung, Taiwan

CLUB'S FOUNDING PRESIDENT

Sep. 2019 - Jun. 2021

- R&D, Server Maintainer
- Teaching, Communicator

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)

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.