

Hubertus Adhy Pratama Setiawan

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Work Experiences

UBS AG

Singapore

Graduate Trainee (Production Support Analyst)

Jul 2024 - Present

- Acting as L2 support for client-facing applications. Work with developers to troubleshoot and resolve technical issues and provide solutions to the helpdesk team to minimize downtime and maintain a good user experience.
- Implemented automated health checks for internal and external applications using Python and Selenium, saving 1 man-hour daily.
- Developed an internal dashboard using React and Flask that combines data from different systems (Splunk, AppDynamics, on-premise mainframe computer), allowing engineers and senior management to monitor the overall health of critical systems.

National University of Singapore (NUS)

Singapore

Teaching Assistant

Jul 2023 - Jun 2024

- Taught object-oriented and functional programming concepts to more than 150 students, enabling them to write clean, extensible, and maintainable code. Taught a second course on systems security, focusing on binary exploitation (buffer overflow, return-oriented programming) and kernel observability (Linux Security Modules, eBPF).
- Previously taught Programming Methodology, Data Structures and Algorithms, and Computer Networks to ~120 students across 4 semesters as an undergraduate tutor. Received the [Honor List of Student Tutors](#) award for excellence in teaching.

TRS Forensics

Singapore

Information Security Intern

Dec 2021 - May 2022

- Prevented penetration testers from attacking out-of-scope targets during an engagement by writing an internal tool using Flask, OpenVPN, Linux iptables, and the ELK stack.
- Enabled the management team to make data-driven decisions by creating an internal data visualisation website using Dash, Flask, and MySQL. Automated the deployment process to Apache HTTP Server using bash scripts.
- Improved the security posture of TRS' clients by conducting penetration testing on their web and Android applications. Wrote comprehensive reports with clear steps to help clients patch their systems.

Envision Digital International

Singapore

Cybersecurity Engineer Intern

Jun 2021 - Sep 2021

- Verified the security of Envision's products by conducting vulnerability scanning and threat modelling. Wrote bash scripts to automate the process of uploading the software, scanning, and retrieving the scan result.
- Set up a Linux server as a testing environment to integrate the ELK stack into the company's SIEM systems. Created SSL certificates and configured the TLS stack to preserve the confidentiality of the logs.

Education

National University of Singapore (NUS)

Singapore

Bachelor of Computing in Information Security

Aug 2019 - Jun 2023

- CAP: 4.69 out of 5 (3.75 out of 4)
- Recipient of the Cyber Security Agency of Singapore (CSA) Book Prize, a scholarship awarded to the top 4th year student in B.Comp - Information Security (AY2022-23).
- Specialised in parallel computing, networking and distributed systems, and systems security.

Technical Skills

Programming Languages

Python, C/C++, Rust, Java, JavaScript, Bash, SQL

Technologies and Tools

Linux, Docker, Git, Flask, Splunk, Ansible, AWS, Elasticsearch, Burp suite, GDB, Ghidra, Wireshark

Certifications

[Red Hat Certified System Administrator](#)

Projects

Redis Clone | <https://github.com/adhy-p/codecrafters-redis-python/>

2024

- Developed a Redis clone using Python. Similar to the original Redis implementation, it supports timeout, replication, and persistence, which improves read scalability and allows for data recovery in the case of system failure.

Matching Engine

2023

- Built a multi-threaded order-matching engine in C++ to match buy and sell orders using the price-time priority rule.
- Ensured the correctness and scalability of the software by utilising modern C++ features such as std::atomic and std::shared_mutex, combined with rigorous unit and stress tests.

Extracurricular Activities

- [NUS Greyhats](#) (Oct 2021 - June 2023): NUS' cybersecurity interest group. Presented [a talk about Burpsuite](#), played capture the flags (CTF) as a team, and participated in internal trainings in cryptography, web exploitation, reverse engineering, and binary exploitation.