



GERALD LIM WEE KOON

CYBER SECURITY RESEARCHER

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github.com/mathscantor

ABOUT ME

Cyber Security researcher, specializing in Linux and embedded systems, with a focus on vulnerability research and post-exploitation.

LINKS

Personal Cyber Blog

<https://mathscantor.github.io>

LinkedIn

<https://www.linkedin.com/in/gerald-lim-mathscantor/>

HOBBIES

In my free time, I enjoy playing video games, conducting independent cybersecurity research, and sharing practical techniques that help others work more efficiently. I also play the piano and saxophone.

CERTIFICATES



OSCP - Offensive Security Certified Professional

[Verify](#)



OSWE - Offensive Security Web Expert

[Verify](#)

WORK EXPERIENCE

DSO National Laboratories

Singapore
Aug 2021 - Present

Member of Technical Staff

- Conducted in-depth security research on edge and embedded devices to identify and assess product vulnerabilities.
- Contributed to the discovery of undisclosed 0-days
- Led proactive threat hunting initiatives across enterprise environments and managed multiple stakeholders
- Discovered and developed new techniques used to evade detection
- Created tools to facilitate reverse-engineering research:
 - filemon**: Linux File Monitoring Tool using Fanotify APIs
 - mGDB**: Multi-process debugging with GDB
 - kforge**: Automated tool for direct kernel patching
- Automated threat-hunting processes:
 - elasticfetch**: Automates pulling of logs from Elasticsearch
 - threat-hunting-tools**: Automates threat hunt workflows
- Presented in GovWare
 - 2024: 5G PT Symposium; DDPK Technology in 5G
 - 2025: 5G PT Symposium: Fuzzing on 5G Roaming Interface
- Conducted cybersecurity workshops to guide aspiring students:
 - Sentinel Programme 2023: CTF-based Threat Hunting Challenge
 - YDSP 2022 - 2025: Adversary Tactics, Technique and Procedures

DSO National Laboratories

Singapore
Jun 2020 - Dec 2020

Summer Intern

- Conducted CVE studies on Linux kernel-related bugs
- Automated static analysis to identify potential attack surfaces
- Developed an IoT scanner to discover new kernel bugs

EDUCATION

National University of Singapore

Singapore
Aug 2017 - Jun 2021

Bachelor of Computing (Information Security)

- Graduated with Honours Merit

SKILLS

Programming Languages

- C/C++
- Rust
- Python
- Bash
- PHP
- Java
- JavaScript

Network Administration

- Storage & Backup Servers
- Elasticsearch for Centralized logging
- Gitlab Services
- DNS Servers

Reverse Engineering

- Fuzzing
- Ghidra Scripting
- GDB/LLDB
- CodeQL

AI Automation

- GDB MCP Server
- Workflows for Static Analysis