Hsuan-Ming **Chen**

SECURITY RESEARCHER · SOFTWARE ENGINEER

New Taipei City 220, Taiwan

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Skills

Product Security	PSIRT/CSIRT Workflow, Vulnerability Triage, CVE, CISA KEV, EPSS, SBOM Analysis
Supply Chain Security	Firmware Signing, RSA, HSM, Supply Chain Risk Management, Software Composition Analysis
Detection & Response	Log Analysis, IDS/IPS Concepts, Threat Correlation, Incident Investigation, MITRE ATT&CK
Backend & Systems	Go, Python (Django), C/C++, Linux, Shell, Concurrent Processing, Performance Optimization
Cloud & DevSecOps	Docker, Kubernetes, CI/CD Integration, PostgreSQL, MongoDB, Kafka, Elasticsearch, Trivy
Frontend	Vue 3, Legacy Migration (Ext.js → Modern Frameworks), LLM-assisted Code Transformation
Languages	Mandarin (Native), English (Professional), Taiwanese (Native), German (Basic), Japanese (Basic)

Research & Professional Experience

Product Developer
New Taipei City, Taiwan

SECURITY INCIDENT RESPONSE TEAM | SYNOLOGY INC.
Oct. 2019 - Present

- Discovered and reported an ARM32-specific denial-of-service vulnerability in ClamAV, contributing to upstream security remediation.
- Migrated DSM Security Advisor, Control Panel, and AntiVirus modules from Ext.js to Vue 3, leveraging LLM-assisted code transformation to accelerate large-scale legacy UI modernization.
- Designed a hardware-aware producer–consumer scanning pipeline for AntiVirus Essential (ClamAV) with adaptive multi-threading and ring-queue scheduling, reducing scan time by 50% while maintaining stable CPU and memory utilization.
- Integrated Hardware Security Module (HSM) into firmware signing workflow using RSA signatures to protect Synology camera firmware integrity.
- Architected a company-wide SBOM platform integrating build pipeline, container registries (Harbor/GitLab), AWS, and Kubernetes environments with Trivy and ClamAV scanning to detect vulnerable components.
- Developed an internal Incident Response platform (Python/Django) aggregating MITRE CVE, CISA KEV, EPSS, RSS, Crawler, SentinelOne telemetry, dark web intelligence, and bounty program workflows for vulnerability prioritization and tracking.
- Built automated firewall log correlation and analysis system to identify suspicious network behavior and support proactive threat mitigation.

Graduate Researcher in Intelligence Defensive System Laboratory
Kaohsiung, Taiwan

DEPARTMENT OF INFORMATION MANAGEMENT | NSYSU
Sep. 2015 - Jul. 2017

- Utilized Machine Learning to evaluate security incident logs from Checkpoint and ArcSight about Advanced Persistent Threats (APT).
- Migrated Hadoop and Spark cluster from Xen to Docker environment and promoted an over 50% performance increase.
- Systemized a high throughput pipeline with Fluentd, Kafka, Spark, MongoDB clusters on Docker to analyze 1TB real-time log data.
- Created an automatic deployment of Hadoop and Spark standalone cluster script on DockerHub and brought out 300+ downloads.
- Lectured the deployment and usages of Hadoop, Spark and Docker for over 40 graduate students in a financial trading program.

Trainee of Advanced Information Security Summer School (AIS3)
Kaohsiung, Taiwan

TAIWAN MINISTRY OF EDUCATION
Aug. 2016 - Aug. 2016

- Enhanced practical skills through the actual combats and the sharing of related experience in the information security field.

Education

Master of Science in Informatics
Linz, Austria

JOHANNES KEPLER UNIVERSITÄT LINZ (JKU)
Sep. 2017 - Apr. 2019

- Migrating Mathematical Programs to Web Interface Frameworks
  Keywords: Remote Application Platform, Java, Web, Migration

Master of Business Administration in Information Management
Kaohsiung, Taiwan

NATIONAL SUN YAT-SEN UNIVERSITY (NSYSU)
Sep. 2015 - Jun. 2019

- Big Data Intrusion Detection Using Cluster Computing
  Keywords: Big Data, Virtualization, Cluster Computing, Intrusion Detection System, Cyber Security

Honors & Awards

May 2017	**The Honor Mention Award,** Taiwan Information Security Center (TWISC) TCAT CTF Competition	*Taiwan*
Dec. 2016	**The Premium Award,** Taiwan Information Security Center (TWISC) Big Data Competition	*Taiwan*
Aug. 2016	**2nd/75,** Advanced Information Security Summer School (AIS3) Competition Final	*Taiwan*