Rouvin Erh

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Website: https://rouvinerh.github.io | **Expected Graduation:** May 2026

EDUCATION AND CERTIFICATIONS

National University of Singapore (NUS)   Aug 2022 – May 2026
Bachelor of Computing in Information Security with Honours
- Achieved GPA of 4.71 / 5.00, on track to First Class Honours.
- Achieved Dean's List award for AY 23/24 Semester 2.

Security Certifications
- OffSec Certified Web Expert (OSWE)
- OffSec Exploit Developer (OSED)
- OffSec Certified Professional (OSCP)
- Certified Red Team Expert (CRTE)
- Certified Red Team Operator (CRTO)

EXPERIENCE

Offensive Security Engineer Intern, PayPal   May 2025 – Present
- Triaging of reports from HackerOne, inclusive of revalidation of vulnerabilities and testing on other endpoints.
- Conducting source code review and penetration tests on new features implemented by developers.

Security Researcher, Synack Red Team   May 2025 – Present
- Carrying out penetration tests on web and host targets on a freelance basis on Synack platform.

Security Engineer Intern, Ascenda Loyalty   May 2024 – Aug 2024
- Conducted penetration testing and source code reviews for Ruby and TypeScript codebases across 6 microservices in both front-end and back-end.
- Identified over 20 security vulnerabilities, including several high-severity issues with large business impacts based on CVSS v4.0 scoring.
- Collaborated with software developers to identify and remediate security flaws by analysing vulnerable code and recommending fixes.
- Developed and integrated an automated Dynamic Application Security Testing (DAST) solution using OWASP ZAP, Bash, and JavaScript packaged in a Docker image, into an existing Jenkins CI/CD pipeline.
- Wrote Kubernetes configuration files to deploy newly implemented security engineering solutions.
- Created an intentionally vulnerable machine with Ruby on Rails, Docker, and Kubernetes for security training.

Attack Simulation Intern, Cyber Security Agency of Singapore   May 2023 – Aug 2023
- Co-developed detection engineering and purple team workshop for the Operational Technology Cybersecurity Expert Panel (OTCEP) 2023.
- Created Caldera adversary profiles for APT groups like LockBit 3.0, leveraging TTPs from threat intelligence and MITRE ATT&CK Framework.
- Built an enterprise Active Directory cyber range environment with 6 virtual machines using Vagrant, Bash, and PowerShell for running adversary profiles.
- Deployed and configured tools such as Splunk and Procmon in cyber range for detection engineering lesson.

PROJECTS

Security Blog
- Documented cybersecurity knowledge gained from courses, bug bounties, CTFs and independent research in areas such as malware development.
- Authored partially or fully disclosed bug bounty reports.
- Published blogs on various security topics, including malware distribution on GitHub, referenced by sites such as BleepingComputer.

CTF Competitions
- Achieved the highest local (Singapore) rank of 2nd and attained Elite Hacker status on HackTheBox.
- Ranked 73rd in HackTheBox Global Cyber Skills Benchmark CTF 2025 under team PayPal.
- Completed over 350 machines on Proving Grounds Practice and HackTheBox.
- Writeups available at: https://rouvin.gitbook.io/writeups

Bug Bounties
- Participated in Vulnerability Disclosure Programs and Bug Bounties on YesWeHack.
- Submitted vulnerability reports to Dutch Government and NUS that were accepted and resolved.

EXTRA-CURRICULAR ACTIVITIES

National Athlete, Singapore Canoe Federation   **May 2024 – Present**
- Represented Singapore in Southeast Asian Canoe Sprint Championships 2024 in Vietnam, placed 2nd in Under 23 Quadruples 200m.
- Represented Singapore in FISU World University Championships Canoe Sprint 2024 in Montemor-O-Velho, Portugal.

Cybersecurity Instructor, DART Consulting and Training   **Mar 2024 – Present**
- Taught cybersecurity to youths to raise cyber awareness and hygiene in Singapore as part of Sentinel Programme with Digital and Intelligence Service (DIS) Singapore.
- Crafted engaging lesson plans to teach 20 students the basics of programming and computer network fundamentals.

Captain, NUS Canoeing   **May 2023 – May 2024**
- Appointed Captain of an 80-member varsity team, responsible for overseeing and leading all aspects of the team's performance and operations.
- Secured multiple medal finishes in national canoe marathon and canoe sprint competitions.
- Contributed to the team's championship title in the Inter-Tertiary Canoe Sprint Championships 2024.