

# Rouvin Erh

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

## EDUCATION AND CERTIFICATIONS

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### National University of Singapore (NUS)

Aug 2022 – May 2026

#### *Bachelor of Computing in Information Security with Honours*

- Achieved GPA of 4.74 / 5.00, on track to First Class Honours.
- Achieved Dean's List for AY 23/24 Semester 2.

#### Security Certifications

- OffSec Experienced Pentester (OSEP)
- OffSec Certified Web Expert (OSWE)
- OffSec Exploit Developer (OSED)
- OffSec Certified Professional (OSCP)
- Certified Red Team Expert (CRTE)
- Certified Red Team Operator (CRTO)

## EXPERIENCE

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### Bug Bounty and Proactive Testing Intern, PayPal, Singapore

May 2025 – Present

- Triageed HackerOne bug bounty reports, assessed risk/impact, and determined bounty awards.
- Collaborated with internal teams to remediate vulnerabilities and close reports within SLA.
- Conducted penetration tests to proactively uncover recurring security issues.
- Researched and mitigated emerging threats such as TapTrap on PayPal's Android application.
- Designed and deployed Streamlit / Plotly dashboards with automated data collection to visualise bug trends.
- Automated workflows with Python and Jira, streamlining daily operations.

### Security Engineer Intern, Ascenda Loyalty, Singapore

May 2024 – Aug 2024

- Conducted penetration testing and source code reviews of Ruby and TypeScript microservices (front-end and back-end, 6 services).
- Discovered 20+ vulnerabilities, including multiple high-severity issues such as Account Takeovers.
- Partnered with developers to remediate flaws and drive fixes through the vulnerability lifecycle.
- Built and integrated an automated DAST pipeline using OWASP ZAP, Bash, and JavaScript in Docker, deployed via Jenkins CI/CD.
- Authored Kubernetes manifests to deploy newly developed security solutions.
- Developed an intentionally vulnerable Ruby on Rails app (Docker + Kubernetes) for internal security training.
- Wrote technical blog content on company blog: <https://loyalty.dev/posts/rails-to-the-cloud>

### Attack Simulation Intern, Cyber Security Agency of Singapore, Singapore

May 2023 – Aug 2023

- Co-developed detection engineering workshop for the OT Cybersecurity Expert Panel (OTCEP) 2023.
- Authored Caldera adversary emulation profiles for APT groups (e.g., LockBit 3.0), mapping TTPs using MITRE ATT&CK Framework.
- Built an enterprise Active Directory cyber range with 6 VMs using Vagrant, Bash, and PowerShell to execute adversary playbooks.
- Deployed and configured Splunk and Procmon in the range to support detection engineering training.

## PROJECTS

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### Security Blog

- Documented knowledge from courses, bug bounties, CTFs, and self-study on topics such as malware development.
- Authored and published bug bounty reports (partially / fully disclosed).
- Wrote security blogs cited by outlets such as TheBleepingComputer.
- Maintain personal blog: [rouvin.gitbook.io](https://rouvin.gitbook.io).

### CTF Competitions

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

### Bug Bounties

- Actively hunted on VDPs and Bug Bounties on BugCrowd and YesWeHack.
- Submitted valid reports to organisations such as the Dutch Government and NUS that were resolved.

## SKILLS

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Penetration Testing, OWASP Top 10, Web Application Security, Mobile Application Security, Bug Bounty, Exploit Development, Source Code Review, Red Teaming, Malware Development, Detection Engineering, Vagrant, Docker, Git, Python, JavaScript, Kubernetes, PHP, Ruby on Rails.

## EXTRA-CURRICULAR ACTIVITIES

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### National Athlete, Singapore Canoe Federation

**May 2024 – Present**

- Represented Singapore in Southeast Asian Canoe Sprint Championships 2024 in Vietnam, placed 2<sup>nd</sup> 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 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.