

## Education

- 2023 – 2025 **Master of Computing**, *Infocomm security*, National University of Singapore  
Thesis: *Automated Test Case Reduction in Query-Specific Language(s)*
- 2017 – 2021 **B.Tech**, *Computer Engineering*, Inderprastha Engineering College, India

## Work

- Aug'2024 – **Research Assistant**, *NUS TSS group*, National University of Singapore  
Present
  - Researched scheduling algorithms for systematic exploration of thread interleavings in concurrency testing.
  - Developed dynamic analysis tools for race detection from program execution traces.
  - Built experimental frameworks for evaluating fuzzing techniques across software testing benchmarks.
- Jan'2024 – **Teaching Assistant**, *National University of Singapore*  
Dec'2024
  - Conducted weekly tutorial classes and assisted with exam sessions and grading assignments for CS2107 (Introduction to Information Security)
- July'2021 – **Product Security Engineer**, *Red Queen Dynamics*, Washington, D.C.  
Aug'2023
  - Worked as a full-stack developer to develop a security training product from scratch (using Django/PostgreSQL)
  - Created a CI/CD pipeline for automated deployments.
  - Managed DevOps for the team; maintained cloud infrastructure (AWS) to support internal applications.
  - Performed ad-hoc penetration tests for various clients.
- Aug'2020 – **Bug Bounty Hunter**, *HackerOne/BugCrowd/Intigriti*, Remote  
Aug'2023
  - Listed on the Hall-of-Fame of: Google, GitHub, PayPal, US DoD, DELL, and Atlassian.
  - Performed static and dynamic code analysis of Android and Web applications.
- Aug'2019 – **Developer**, *Vulnhub/TryHackMe*, Remote  
Mar'2020
  - Developed Capture The Flag (CTF) challenges for TryHackme.com focused on web vulnerabilities like XXE, XSS, and JWT.
  - Created vulnerable machines for VulnHub.com with custom applications in Python and Bash.

## Open Source Internships

- May – Aug 2023 **Student Developer**, *Google Summer of Code - The Honeynet Project*
  - Enhanced a high-interaction honeypot (Snare/Tanner) with improved speed, persistent storage, and API functionality.
- May – Aug 2018 **Student Developer**, *Google Summer of Code - XBMC Foundation*
  - Developed a Python tool for static code analysis of Kodi (media player for smart TVs) addons.

## Academic Services

- Aug – Sept 2024 **Artifact Evaluation Committee member**, *SOSP'24*
  - Reviewed and evaluated submitted research artifacts for reproducibility as part of the SOSP 2024 Artifact Evaluation Committee.

## Certifications

- 2021 **OSCP**, Offensive Security Certified Professional