Mehtab Zafar

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Education

2023 – 2025 **Master of Computing**, *Infocomm security*, National University of Singapore

2017 – 2021 **B.Tech**, *Computer Engineering*, Inderprastha Engineering College, India

Work

Aug'2024 – Present **Research Assistant**, *National University of Singapore*
- Conducted research on fuzzing and automated software testing under Professor Abhik Roychoudhury.
- Contributed to projects aimed at improving bug detection, fuzzing efficiency, and automated software repair techniques.

Jan'2024 - Dec'2024 **Teaching Assistant**, *National University of Singapore*
- Conducted weekly tutorial classes and assisted with exam sessions and grading assignments for CS2107 (Introduction to Information Security)

July'2021 - Aug'2023 **Product Security Engineer**, *Red Queen Dynamics*, Washington, D.C.
- 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 - Aug'2023 **Bug Bounty Hunter**, *HackerOne/BugCrowd/Intigriti*, Remote
- 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 - Mar'2020 **Developer**, *Vulnhub/TryHackMe*, Remote
- 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.

Projects

2021 – 2022 **Slicer**, Python
Developed a tool to automate the bug-hunting process for Android applications (APKs) by identifying potential vulnerabilities in components - activities, receivers, and services.

2017 – 2018 **Liffy**, Python
Created a tool to automate the discovery and exploitation of Local File Inclusion (LFI) attacks, which can be utilized to obtain a reverse shell.

Certifications

2021 **OSCP**, Offensive Security Certified Professional