

Internship Final Report

Student Name: Priyanshu Nagar

University: Manav Rachna International Institute of Research and Studies

Major: Computer Science

Internship Duration: July 1st, 2025 - July 31st, 2025

Company: ShadowFox

Domain: Cyber Security

Mentor: Mr. Surendharan

Assistant Mentor: Miss Manasa.G.V

Coordinator: Mr. Aakash

Objectives

The main objective of this internship was to gain practical exposure in the field of cybersecurity by working on real-world tasks such as port scanning, directory brute forcing, and network traffic analysis. The aim was to understand the working of different security tools, apply theoretical knowledge in practical environments, and develop an analytical mindset to identify and assess system vulnerabilities.

Tasks and Responsibilities

During the internship, I was assigned beginner-level cybersecurity tasks which included:

- ◆ Performing port scanning using Nmap to detect open and vulnerable ports.
- ◆ Brute-forcing hidden directories on a web server using Gobuster/Dirb.
- ◆ Intercepting login traffic using Wireshark to identify exposed credentials.

My responsibilities included understanding the task requirements, executing each task step-by-step, capturing outputs through screenshots, and preparing a structured report explaining the methodology and findings.

Learning Outcomes

Through this internship, I gained hands-on experience with several essential cybersecurity tools. I learned how network packets can be intercepted, how to use filters in Wireshark, how services running on different ports can lead to exploitation, and how to explore hidden web directories. It also improved my understanding of basic reconnaissance, information gathering, and the importance of secure protocols like HTTPS.

Challenges and Solutions

One of the major challenges I faced was related to system limitations, as my laptop struggled to run virtual machines efficiently. Due to this, I decided to focus fully on the beginner-level tasks to ensure quality over quantity. Another challenge was understanding packet structures in Wireshark. I overcame this by referring to documentation and experimenting repeatedly until I was confident. Writing detailed and honest documentation was also a new experience for me, but it helped sharpen my communication skills.

Conclusion

This internship helped me develop a strong foundation in cybersecurity and made me more confident in approaching practical security problems. It was a great learning opportunity where I could apply tools and concepts in a controlled environment. The guidance provided by the mentors and the structured approach to tasks made the learning experience even more effective.

Acknowledgments

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