Aira Nicole Natividad

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Objective

Eager to start a career in cybersecurity, applying analytical skills and a strong technical foundation to protect systems and mitigate emerging threats.

Education

University of the Philippines - Los Baños — Los Baños, Laguna
Bachelor of Science in Computer Science — *Sept. 2021 – Present*

Cainta Catholic College — Cainta, Rizal
Senior High School – STEM Strand — *June 2019 – June 2021*

Experience

Tech Intern — June 2024 – July 2024
Razza Consulting Group Inc. — *Quezon, City*

- Gained hands-on experience with Agile workflows, daily stand-ups, and project management tools like Jira
- Developed frontend features using React and JavaScript, collaborating with developers and tech leads
- Implemented and optimized web scraping modules using Cheerio to extract and process data
- Enhanced debugging and problem-solving skills by tackling real-world development challenges

Projects

Capture The Flag (CTF) Challenges | *GDB, Python, Wireshark, Ghidra* — Dec. 2024

- Exploited buffer overflows by using GDB to analyze memory, find offsets, and overwrite return addresses
- Extracted hidden flags from PCAP files in Wireshark by reconstructing base64-encoded network data
- Reverse-engineered executables in Ghidra, analyzing functions and obfuscated strings to uncover flags
- Decrypted XOR-encoded messages and cracked MD5 hashes using Python for cryptographic challenges

Penetration Testing on Virtual Machines | *Kali Linux, Metasploit, Nmap* — Dec. 2024

- Scanned for open ports using Nmap, identifying vulnerabilities in ProFTPD and SMB services
- Exploited ProFTPD backdoor with Metasploit, gaining root access and executing system commands
- Extracted password hashes from /etc/shadow and attempted cracking using John the Ripper
- Maintained persistence by injecting an SSH public key into authorized_keys for remote access

Malware Analysis | *VirusTotal, Strings, Wireshark, Ghidra* — Dec. 2024

- Detected keylogging and persistence techniques by analyzing malware in VirusTotal
- Reverse-engineered executables using Ghidra, extracting obfuscated API calls for data exfiltration
- Investigated network traffic with Wireshark, identifying C2 communication and suspicious connections
- Examined registry modifications and startup persistence, confirming malware's stealth mechanisms

Co-curricular Activity

UPLB Computer Science Society (UPLB COSS) — Oct. 2023 – Present
Backend Team Lead

- Leading the backend development for the organization's website using the MERN stack
- Collaborating with the team on system design and feature implementation to ensure secure coding practices and mitigate web vulnerabilities

Technical Skills

Languages: Python, C/C++, Bash Scripting, Assembly (NASM), Javascript, PHP, SQL (PostgreSQL, MariaDB)
Cybersecurity Tools: Metasploit, Nmap, Wireshark, Ghidra
Security Techniques: Penetration Testing, Binary Exploitation, Malware Analysis, Reverse Engineering, Web Exploitation, Digital Forensics, Cryptography

References

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