Nikhil Kumar

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Summary

Hands-on experience in penetration testing, SOC operations, and developing custom security tools.

SKILLS

Languages & Programming: C++, Python, Linux Shell Scripting, SQL

Technologies & Tools: Wireshark, Nmap, Nessus, Burp Suite, Metasploit, VLAN Setup, LAN Troubleshooting, Cisco Router Configuration, AWS (IAM, EC2, S3, VPC, CloudTrail, Security Groups)

EDUCATION

Vellore Institute of Technology, Bhopal

B. Tech, Computer Science (Cybersecurity & Digital Forensics)

June 2022 – Ongoing

Cumulative GPA: 8.15/10

Professional Experience

Hack Secure Apr 2025 – May 2025

Cybersecurity Intern

Remote

- Conducted threat detection, incident response, and malware analysis in SOC simulations.
- Utilized Wireshark, Splunk, ELK Stack, SQLMap, and VirusTotal for scanning and vulnerability testing.
- Performed SQL injection, XSS testing, port scanning, and directory brute-forcing.
- Analyzed ransomware with Sysmon/Splunk; mapped CVEs and attacker behavior.
- Enhanced SIEM, log analysis, packet inspection, and network forensics skills.

PROJECTS

PassGenius (Python Security Suite) | zzcvbn-python, rich, PyYAML, HIBP - API | Link

- Developed a CLI tool for advanced password auditing and offensive security, providing robust, pattern-based strength analysis.
- Proactively detected compromised credentials and automated custom wordlist generation for penetration testing.
- Supported vulnerability assessment workflows with detailed reporting and analysis.

NetScan (Python Tool) | python-nmap, prompt-toolkit, tqdm, colorama, tabulate | Link

- Created a network scanning tool leveraging Nmap for efficient host discovery, port scanning, and service enumeration.
- Designed for network administrators and security professionals with command-line and interactive modes.
- Enabled detailed reporting and scan history tracking for vulnerability detection.

Secure Chat App | Python, Flask, SocketIO, Werkzeug, Bleach, Flask-Limiter, Flask-SQLAlchemy | Link

- Built a secure, real-time messaging platform with low-latency, bidirectional communication.
- Implemented robust user authentication with password hashing and protection against XSS vulnerabilities.
- Integrated rate-limiting and persistent data storage for production-ready deployment.

 $\textbf{Linux-CIS-Audit Tool} \mid \textit{Python, google-generativeai, rich, python-dotenv} \mid \textbf{Link}$

- Developed an AI-enhanced tool for auditing Debian-based Linux systems using CIS Benchmarks.
- Generated detailed security posture scores and color-coded results for failed checks.
- Leveraged Google's Gemini API for expert explanations and actionable system hardening recommendations.

CERTIFICATIONS

- Software Security Testing: Vulnerability analysis and security testing with Nessus, OWASP ZAP, Burp Suite for static/dynamic analysis, penetration testing vs. OWASP Top 10, NIST. Reports with CVSS scoring.
- IBM Cybersecurity Analyst : SOC skills in threat intelligence, SIEM, incident response, network defense, compliance.
- TryHackMe Advent of Cyber 2024: Hands-on SOC experience in threat detection, web security, and infrastructure defense.
- Practical Labs CTFs (TryHackMe & CyberDefenders): Strengthened skills in incident response, threat hunting, and vulnerability analysis.