RAHUL KUMAR

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TECHNICAL SKILLS AND CERTIFICATIONS

Scripting Languages and Operating Systems: Python, Java, Go, JavaScript, Shell, LaTeX, Linux, Windows and macOS.
Applications: GitHub, Burp Suite, JIRA, Okta, Osquery, Neo4j, Qualys, Terraform, Splunk, Wazuh and IBM QRadar.
Standards and Practices: OSINT, OWASP, SIEM, NIST, CIS, PCI DSS, ISO 27001, HIPAA, GDPR, SSL/TLS, AES, RSA, ECC.

Tools: Docker, Nmap, Metasploit, Wireshark, AWS, GCP, Azure, OWASP ZAP, Hydra, Nessus and SQLmap.
Certifications: *CompTIA* Security+, *CompTIA* CySA+, *CompTIA CSAP*, CCSK, *EC-Council:* Certified Ethical Hacker,
Microsoft Technology Associate: Security Fundamentals and Networking Fundamentals, *OSCP* (in progress)

PROFESSIONAL EXPERIENCE

George Mason University (Graduate Teaching Assistant)   **Fairfax, Virginia, USA | January 2022 – Present**
- Spearheaded the creation and implementation of lab-based projects and simulations for Computer Networking and Cyber Security courses, helping 100+ students each semester with lab activities and problem-solving.
- Engineered Python-integrated Selenium auto-grading tools, reducing grading time by 20%, and improving efficiency and precision. Held regular office hours and provided 1-on-1 support to help students on Blackboard and Canvas.

George Mason University (Research Assistant)   **Fairfax, Virginia, USA | January 2024 – May 2024**
- Researched CAPTCHA security flaws, devised models to bypass CAPTCHA defenses with 90% accuracy, and proposed security enhancements. Analyzed CAPTCHA farms (2Captcha), decoded their workflows and exploitation methods.
- Designed an automated web crawler with a 90% CAPTCHA bypass rate for real-time e-commerce data collection and commodity price monitoring using dashboards.

Cyber3ra (Cybersecurity Intern)   **New Delhi, India | May 2021 – August 2021**
- Accelerated data security and cryptographic operation speeds by 12% through the strategic selection and implementation of HSMs, elevating the organization's encryption capabilities.

JSC Golla Engineering Pvt Ltd (Security Analyst)   **Remote, India | June 2019 – April 2021**
- Optimized and fortified metrics and reports on vulnerability management and assessments, implementing segmentation and isolation strategies that reduced cyber-attacks by 13%.
- Spearheaded technical support and investigated SIEM alerts with IBM QRadar and Splunk, improving threat detection by 10% through advanced network and log data analysis.
- Conducted investigations into malicious emails, led vulnerability assessments, and coordinated with teams to identify threats. Conducted security training for 50+ staff, enhancing organizational security awareness.

PROFESSIONAL PROJECTS

WebCrawler (Research Analyst: George Mason University)   **August 2023 – December 2023**
- Developed WebCrawler for private data extraction and identified security vulnerabilities by detecting hidden links in source code comments across 1 million websites.
- Integrated a rotating proxy system with Python libraries (Requests, BeautifulSoup, SpaCy), enabling unique IP and port assignments per request and achieving 95% accuracy.

Malware Analysis (George Mason University)   **August 2022 – December 2022**
- Conducted comprehensive malware analysis of a keylogger in a secure virtual sandbox, identifying 12 patterns using Static and Dynamic Analyses and Reverse Engineering with tools like IDA Pro, OllyDbg, YARA, and FakeDNS.
- Identified critical vulnerabilities and risks exploited by malware, demonstrating expertise with tools like PEiD, Virus Total, and Process Monitor for in-depth malware fingerprinting, obfuscation detection, and network analysis.

EDUCATION

George Mason University   **Fairfax, Virginia, USA**
Doctor of Philosophy (PhD) in Information Technology with Cybersecurity Conc (GPA: 4/4)   Expected Graduation – Dec 2027
George Mason University   **Fairfax, Virginia, USA**
Master of Science in Information Systems and Cybersecurity Engineering (GPA: 3.9/4)   Graduated – Dec 2023

Madan Mohan Malaviya University of Technology   **Uttar Pradesh, India**
Bachelor of Engineering in Computer Science (GPA: 3.2/4)   Graduated – May 2021