BHUMIKA SHARMA

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LinkedIn | Github

Aiming to build a career in cloud computing, cybersecurity, and AI/ML by leveraging expertise in technical support and AI-powered solutions. Focused on strengthening knowledge in advanced networking, network security, and adaptive cybersecurity while contributing to innovative, impactful projects in AI-driven automation. Dedicated to developing cutting-edge skills and taking on leadership roles to inspire professional growth and drive technological advancements.

EDUCATION

Sept 2024 - Present | National University of Ireland, Galway

MSc in Computer Science - Adaptive Cybersecurity

August 2019 - May 2023 | University of Petroleum and Energy Studies, India   **8.31/10 CGPA**

B. Tech in Computer Science Engineering- Specialization in Cyber Security and Forensics

SKILLS/TECHNOLOGIES

Professional Tools
- CyberArk EPM (PAM), CrowdStrike Falcon (EDR), MS Defender (Antivirus), Shadowplex Acalvio (Deception Technology), Splunk(SIEM), Intune(Endpoint Management).

Programming & Scripting:
- Languages: Python, Java, C++, SQL, KQL.
- Scripting: PowerShell, Python.
- Data Analytics & Modeling: Machine Learning, Deep Learning, NLP.

Cloud Computing:
- Platforms: Google Cloud (Skill Boost)

Database Management:
- Relational Databases: SQL.
- NoSQL: MongoDB.

Cybersecurity:
- Network Security, Cryptography, Penetration Testing
- TryHackMe and HackTheBox

PROFESSIONAL EXPERIENCE

National University of Ireland, Galway

Teaching Assistant - Engineering Computing II | January 2025 - April 2025

- 2D Games Programming in Java | January 2025 - April 2025

- Cybersecurity and Cryptography | September 2024 - December 2024

TIAA Global Capabilities

Trainee - Cybersecurity | July 2023 - August 2024
- Enhanced security by collaborating with cross-functional teams (DLP, IAM, Cloud, Network Security, DevSecOps) and implementing CyberArk EPM and CrowdStrike Falcon across 20,000+ endpoints.
- Collaborated with senior engineers to develop and implement 54+ security policies, applied over 87 critical security patches, and ensured compliance of iOS applications with industry security standards, leading to a 30% improvement in system integrity and a 20% reduction in vulnerability detection time.
- Automated 20+ processes and built 10+ dashboards with PowerShell and Python, cutting manual effort by 40%. Enhanced security for 20,000+ endpoints using tools like CyberArk EPM, CrowdStrike Falcon, Splunk, and MS Defender.

TIAA GBS

Cyber Intern | June 2022 - July 2022
- Managed firewall operations and optimized load balancer configurations, improving network performance by 35% while collaborating on the Web Application Firewall (WAF) project.
- Mitigated OWASP Top 10 vulnerabilities and defended against application layer attacks using WAF solutions - F5 Distributed Cloud WAF.
- Collaborated with 7 cybersecurity teams to optimize organisational security, achieving an integrated approach that improved incident response times by 34%.

RELEVANT PROJECTS

End-to-End Secure Enterprise Network Simulation and Threat Mitigation System
- Configured virtualized environments, optimized network protocols (TCP/UDP, DNS, SSL/TLS), and deployed 5+ firewalls to enhance network security.
- Proficient in IDS/IPS (Snort), VPN setup, HTTPS web server configurations, and advanced threat mitigation (DDoS, DNS spoofing).

Cloud Security Management Platform with Threat Simulation and Mitigation
- Developed a Cloud Security Management Platform with IAM, policy enforcement, and cloud-native tools (AWS GuardDuty, Lambda, Terraform).
- Simulated and mitigated 10+ cloud threats (DDoS, malware injection, credential compromise) and automated incident response workflows, reducing response time by 50%.
- Delivered a scalable, secure, and audit-ready compliance monitoring solution, integrating 20+ security controls for cloud infrastructure protection and reducing audit time by 25%.

CryptSafe: A Secure Cloud Storage System with Hybrid Encryption

- Developed a secure cloud storage system using hybrid cryptography (AES for encryption, RSA for key management).
- Integrated PKI and KMS for secure encryption key management.
- Proficient in Python, Flask, cryptographic protocols, and cloud storage integration for scalable, secure data storage and sharing.

ACHIEVEMENTS

SAP IdeasLab Enterprise Challenge - Winner

- Led a team of 5 students to victory in the IdeasLab Enterprise Challenge by developing an AI solution that improved email management, boosting information retrieval speed by ~70%.
- Presented the final pitch to a panel of 13 judges from Aerogen, Diligent, SAP, and IdeasLab, showcasing the potential impact of the solution.

PUBLICATIONS

Book Name: Data-Driven Mathematical Modeling in Smart Cities

- Author Name: Sabyasachi Pramanik, and K. Martin Sagayam.
- Chapter Name: Survey on DL Methods for Flood Prediction in Smart Cities.

Book Name: Revolutionizing Healthcare Through Artificial Intelligence and Internet of Things Applications

- Author Name: Keshav Kaushik, Susheela Dahiya, Ashutosh Dhar Dwivedi, and Shilpi Aggarwal.
- Chapter Name: A Comprehensive Review on AI Techniques for Healthcare.

Paper Name: Metaverse and Healthcare: An Empirical Investigation

- Published in: 2023 5th International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA).

Paper Name: A Novel Approach Towards Automated Disease Predictor System Using Machine Learning Algorithms

- Published in: International Conference on Emerging Trends in Expert Applications & Security - ICETEAS 2023: Emerging Trends in Expert Applications and Security pp 179–190.