SHOUMIT KARNIK

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EDUCATION

University of Maryland **College Park, Maryland**
Master of Engineering, Cybersecurity, GPA: 3.7/4.0 *August 2019 - May 2021*

Savitribai Phule Pune University (formerly University of Pune) **Pune, Maharashtra, India**
Bachelor of Engineering, Computer Science, GPA: 4.0/4.0 *July 2012 - May 2016*

SKILLS & INTERESTS

Relevant Courses: Governance Risk and Compliance, Penetration Testing, Cloud Security, IoT Security, Malware Analysis
Cyber Skills: Scripting, Risk Assessment, Penetration Testing, Malware Analysis, GRC
Coding/Scripting Languages: Python, C.
Platforms and Frameworks: Git, GitHub, VMware, Docker, Kali Linux
Database: SQL
Tools & Technologies: Nmap, Wireshark, Splunk,
Certificates: Network Security, Information Security
Cloud Experience: Amazon Web Services (EC2, S3, CloudFormation)

RELEVANT WORK EXPERIENCE

Deloitte Touche and Tohmatsu Ltd. **Minneapolis | Virginia, United States**

Cyber Advisory Senior Consultant - Third Party Risk Management *July 2024 - Present*

- Identified and evaluated complex business and security risks. Suggested controls that mitigate these risks and provided opportunities for internal control improvement
- Designed and reengineered business processes and workflows through stakeholder interviews, workshops, and analysis of client process documentation increasing the efficiency by 40 percent.
- Constructed and assessed detailed security programs translating business needs and regulatory requirements into cost effective and risk appropriate controls.
- Built and nurtured meaningful client relationships, understanding a client's business and technology in order to identify, pursue, and ultimately obtain additional consulting opportunities.

Cyber Advisory Consultant - Third Party Risk Management *July 2021 - June 2024*

- Prevented and reduced data exfiltration risks by improving vendor network controls, proxy configurations and physical security measures
- Supported management of security policies and standards in partnership with various security and business teams
- Reviewed recommendations for streamlining existing and future security policies
- Aligned current security standards to NIST CSF and NIST 800-53
- Performed routine risk assessments and drafted custom risk summaries for each vendor with a different existing security posture

- Created a risk matrix which helped quantify risk which was identified with vendors
- Migrated vendors successfully to a client-based cloud solution in AWS, reducing access based on the principle of least privilege and granting secure access to internal client tools.

Revolutionary Integration Group Inc. **Connecticut, United States**
Artificial Intelligence (AI) Cyber Security Engineer Intern (Trusted Security) *June 2020 - August 2020*

- Developed and presented a collaboration based trusted security system simulation, inclusive of architecting, called Dynamic Trust Framework aimed to make data trust boundaries more seamless.
- Demonstrated leadership by planning and documenting a trusted execution project (in an agile environment with briefings to business stakeholders) inclusive of reinforcement and deep learning mechanisms for a quantitative authentication mechanism between agents which increased Information Security and trust in remote access by 60 percent.

Tech Mahindra Ltd. **Pune, Maharashtra, India**
Associate Software Developer (Information Technology) *August 2016 – May 2017*

- Maintained Oracle data presentation systems based on the technology requirements, services, and statistics, while integrating test automation and monitoring to tackle security challenges.
- Dealt with a company ransomware threat successfully by conducting a root cause analysis (motivated from an ITIL standpoint) to intercept the attack and backing up data from a critical sales production server.

ACADEMIC PROJECTS AND PATENTS

IoT Security | Project
IoT security implications and authentication *December 2020*

- Demonstrated facial recognition using the Raspberry Pi single-board computer along with the Pi Camera attachment. The MQTT IoT Protocol was implemented to transmit the data. Security vulnerabilities were found in the protocol and countermeasures were applied by using TLS certificates to preserve confidentiality of passwords.

Cloud Security | Project
Secure Cloud Migration using AWS *December 2020*

- Securely migrated a company's on-premises systems to the AWS Cloud environment as well as improved the company's security posture and discipline by implementing methodologies comprising AWS WAF and AWS IAM. Also created a technical migration report outlining these configurations.

Penetration Testing | Project
Penetration Testing Engagement of a Complex Network *December 2019*

- Operated with a team to collaborate and conduct security assessments for a company's simulated network. Gained access to virtual machines as well as data highlighting the flaws in security controls to triage risks in the company.

Distributed Intrusion Detection System | Patent | ID: IN 201621016976 Issued Nov 14, 2022

- Designed a system which consisted of two types of IDS agents: Network and Host agent.
- Network agent system is an anomaly based agent that employs machine learning to learn from the network and recognize unusual behavior of network metrics (eg - size of packets, hop limit, type of packets etc).The Network Agents also communicate with a server to access its training set periodically or on update. Host agent system is also an intelligent agent. It will look for unusual behavior on its own system i.e. it will look for information like (super user access, user_permission_violations external usb access, ip_tables modifiers etc.
- New types of the attacks are also detected with the help of entropy calculation method using the parameters i.e. packet size, source destination ip_address and input traffic volume to help differentiate between attack and normal packets.

Certifications Currently Pursuing:

- AWS Solutions Architect, CompTIA Security+, Comptia CySA+, Giac GWAPT, OSCP, AWS CCP, CCSK
- Active Capture the Flag [CTF] Participant