Shoumit Karnik

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EDUCATION

University of Maryland **College Park, Maryland**

Master of Engineering in Cybersecurity, GPA: 3.5/4.0 *August 2019-Present*

- Top 5% of the class, Active member of the Cybersecurity Club, Intramural Sports Club and the Anime and Comedy Clubs.

Relevant Courses:

Penetration Testing, Hacking in C, Applied Cryptography and Embedded Systems Hacking and Security

Savitribai Phule Pune University (formerly University of Pune) **Pune, Maharashtra, India**

Bachelor of Engineering, Computer Science, GPA: 4.0/4.0 *May 2016*

- First Class with Distinction, Top 5% of the class, Active member of the Cybersecurity and Robotics Clubs

Relevant Courses:

Operating Systems Administration and Design, Computer Forensics and Cyber Applications, Computer Networks.

SKILLS & INTERESTS

Cybersecurity: Malware Analysis, Threat and Risk Analysis, Penetration Testing, Computer Forensics, Vulnerability Assessment.
Languages: C, C++, Java, Python 2.7,3, Jquery, AngularJS, HTML, CSS, PHP and Android.
Platforms: OneSIEBEL, Kali Linux, Linux Backtrack, Windows 8.1,10, Ubuntu, Fedora and Android Studio.
Databases: Mongodb, OracleDB, MySQL, Cassandra and SQLite.
Tools: Burp Suite, Metasploit, Nessus, Netcat, Nmap, ReconDog, RedHawk, Shodan and Wireshark.
Interests: Playing piano, watching anime and meeting new people.
Certificates: Network Security, Ethical Hacking and Information Security, IOT Security

EXPERIENCE

Tech Mahindra Ltd., *Associate Software Engineer* **Pune, Maharashtra, India**

(A Fortune 500 Multinational IT Company) *August 2016 – May 2017*

- Designed and maintained Oracle OneSiebel CRM software based on the client's requirements in a fast-paced, dynamic environment, which made sure that the security issues they faced reduced by 50%
- Collaborated with other team members to identify opportunities for implementing common security solutions and leveraging existing solutions during the 2017 ransomware threat to the company.

TECHNICAL PROJECTS AND PATENTS

Master of Engineering Binary Programming Project **College Park, Maryland**

Assembly Level Hacking, Return Oriented Programming and Unstable Code Optimization *June 2019 - December 2019*

- Developed various exploits and scripts targeting vulnerable C programs and binaries which helped me deepen my understanding of reverse engineering.
- Successfully authored exploits with vulnerabilities like ret2ret, ret2pop, ret2bss and format string, return oriented programming (ROP) and bypassing the stack guard (stack canary).

Master of Engineering Penetration Testing Project **College Park, Maryland**

Penetration Testing Engagement of a Complex Network *June 2019 - December 2019*

- Implemented a project individually where the goal was to successfully infiltrate into a company's simulated network and gain access to their machines as well as data.
- Delivered a Penetration Testing Technical Report (PTR) that summarized the mission within the Executive Summary and at a minimum, identified the high security risks, threats, and failures found during the mission.

Bachelor of Engineering Technical Patent and Project (*Patent Id* **– *201621016976*) Pune, Maharashtra, India**

Secure Anomaly Based Real Time Intrusion Detection System *June 2015 – May 2016*

- Created a system consisting of two types of IDS agents: Network and Host agent.
- Worked with a team of people to build a network agent system that employed machine learning to learn from the network and recognize unusual behaviour of network metrics with an accuracy rate of over 80%.
- Forecasted new types of attacks with the help of entropy calculation method using various parameters and assessed the risk that they pose based on their common vulnerability index.