
PROFESSIONAL EXPERIENCE

Programming Languages: **Python, C++, Go**

Graduate Research Assistant Johns Hopkins University Sept 2019 – Present (Baltimore)

- Devised content and codebase for Cisco sponsored research: CryptoDoneRight based on Applied Crypto.
- Mentored 20+ student towards their Course Capstone for Object Oriented Programming course as TA.
- Built code review analysis tool based on CFGs, data-flow diagrams and ASTs for node.js apps in Python.

Technical Threat Intel. Intern FireEye Mandiant Intelligence May 2020 – August 2020 (Remote)

- Triaged 15+ nation-state malware as a part of Cyber Espionage team in intelligence services leveraging static, behavioral and dynamic malware analysis techniques with tools such as IDA, Ghidra, Ollydbg and Wireshark.
- Modeled threat intelligence based on attacker attribution and malware analysis while working with most senior technical reverse engineers on analysis / reverse engineering tasks, collaborating with other technical and threat analysts on joint intelligence reporting.

Senior Analyst - III Ernst & Young (EY) Jun 2017 – July 2019 (Mumbai)

- Slashed average turn-around time required for static analysis security testing (SAST) of mobile applications based on OWASP Mobile Top 10 by 40% through developing python and regex-based tool.
- Achieved an efficiency of 70% for monitoring and managing workflow of public & internal applications of several Fortune 500 enterprises, deploying DevSecOps pipeline and overseeing periodic VAPT assessments.
- Designed system architecture for 15+ cloud (AWS /Azure) based deployments of commercial grade apps.
- Analyzed 500+ modern web & mobile applications for Penetration Testing and Red Team assessments.

EDUCATION

Baltimore, MD, USA Johns Hopkins University December 2020

- Master of Science degree in Security Informatics (Cybersecurity), Dec 2020. GPA: 3.96/4.0.
- Graduate coursework: Software Vulnerability Analysis, Security & Privacy in Computing, Cloud Computing Security, Network Security, Ethical Hacking, Critical Infrastructure Protection, Cryptography, Global Trends.

Mumbai, MH, India Mumbai University May 2017

- Bachelor of Engineering degree in Information Technology, May 2017. GPA: 3.7/4.0.
- Undergraduate coursework: Data Structures & Algorithms, Database Management Systems, Systems & Web Security, Big Data Analytics, Computer Organization Architecture, Object Oriented Programming.

RELEVANT COURSE PROJECTS AND RESEARCH

- **Secure, real-time drug delivery monitoring for neurologic pathology: (2020)** Designed threat models, security policies and CI/CD pipeline for development activities in an effort to enforce secure SDLC and DevSecOps practices, developing a lightweight protocol on top of Bluetooth stack for FDA clearances.
- **My Robot is Flawless, Right? (Autonomous Vehicle Security / Machine Learning) (2019):** Developed Q Learning based red teaming tool, for automating penetration testing and vulnerability testing on Autonomous Vehicles, utilizing turtlebot3 as test subject after researching & conducting various exploitation techniques.
- **Decentralized Firewall for Malware Detection (Blockchain / Machine Learning) (2019):** Constructed a prototype as an alternative more durable solution to traditional firewalls (more predictable) and intrusion detection systems using blockchain technology along with autoencoder based Deep learning techniques.

ADDITIONAL EXPERIENCE AND AWARDS

- Creative Red Teaming and Malware Analysis - Masters Certifications from Mandiant Intelligence Services.
- Built Malware Analysis Aggregator tool at Mandiant for OSINT, Internal and Sandbox data – Python/Regex.
- Coursera & EY Udemy certifications for Google Kubernetes, Cloud Identity, Puppet, AWS Solution Architect.
- Spotlight Award for exceeding client's requirements and collaboration with the team at EY.
- Created Internal Tools and visualization dashboards for Secure Coding Reviews and Code Auditing.

TECHNICAL SKILLS AND TECHNIQUES (SPECIALIZED SKILLS)

Languages / Tools: Bash, ReGex, Ansible, Go, Puppet, Chef, Suricata Burp, IDA, Ollydbg, Docker, SQL, Kubernetes, Wireshark, Metasploit

Techniques: Intelligence & Threat Modeling, Cloud Security, System Architecture Design, AWS, Malware Analysis, Reverse Engineering, Application Security, Penetration Testing, Secure Code Review, x86, SCADA, Mobile Security, Network Traffic Analysis, GDPR, OWASP