

Mariam Varkey

+91 70229 65444 | mariamsv66@gmail.com* | [linkedin.com/in/mariam-varkey/](https://www.linkedin.com/in/mariam-varkey/)
[fresherfries.github.io](https://github.com/fresherfries) | [Google Scholar](https://scholar.google.com/citations?user=...)

Summary

Cyber Security Postgraduate looking forward to utilizing the knowledge gained during master's program, research, and multiple courses to protect and secure companies and their assets.

Highly motivated and detail-oriented individual seeking to develop a professional career in cyber security. Have won conference awards for research in cyber security.

Actively working towards the GIAC Enterprise Vulnerability Assessor (GEVA) and OSCP certifications.

Education

Master of Science in Ethical Hacking and Cybersecurity

Sept 2021 - Sept 2022

- Abertay University | Dundee, UK

Network and Web Application Penetration Testing, Engineering Resilient Systems, Information Security

Bachelor of Technology in Computer Science and Engineering

Aug 2016 – Jun 2020

- Vellore Institute of Technology | Vellore, Tamil Nadu

Web Security, Blockchain and Cryptocurrency, Cybersecurity, Internet of Things

Work Experience

Ethical Hacking Intern | Ernst & Young | Bengaluru, Karnataka

May 2018 - Jun 2018

- Learned ethical hacking basics with the cybersecurity team.
- Worked on endpoint security of client systems.

Skills

- Familiar with OWASP Top Ten, Kali Linux and Python for web application security testing.
- Hands-on experience with penetration testing tools such as Burp Suite (Community Edition), Metasploit and sqlmap.
- Utilize and analyze results from scanners such as OpenVAS, Acunetix, OWASP ZAP, Nmap and Tenable Nessus to perform a vulnerability assessment and management.
- Experience with MySQL, CSS, HTML, JavaScript, Apache, and C++.
- Effectively write reports aimed at technical and non-technical personnel.
- Research existing security threats and provide recommendations to combat them.

Projects

Educational Vulnerable Web Application (Masters dissertation)

Jun 2022 – Sept 2022

- Reviewed 15 existing vulnerable web applications built for cybersecurity education.
- Identified the gap in real vs expected knowledge required to use these applications.
- Designing a new novice-friendly vulnerable application to help aspiring penetration testers learn common web application vulnerabilities.

Web Application Penetration Test

Apr 2022

- Utilized the methodology in the OWASP Web Security Testing Guide.
- Produced a comprehensive report to detail the procedure, findings, and suggested improvements.

White Box Penetration Test of a Network

Jan 2022

- Executed steps of a network penetration testing methodology.
- Outlined the findings, evaluations, potential consequences, and recommendations in a report.

* Currently living in the Dubai – can only communicate via WhatsApp audio, messages, and email.

- Constructed the security report aimed at the network security administrator of a company.

Research, Publications & Presentations

Automated Anomaly Detection tool for Industrial Control Systems (Publication Pending)

Jun 2022

- Used Interquartile Range and Finite State Automata to identify anomalies.
- Tested the tool with three varied ICS to improve resilience: Secure Water Treatment testbed, Water Distribution testbed and Gasoil Heating Loop.
- Achieved higher detection rate and better performance than conventional anomaly detection techniques.
- **Accepted by IEEE.**

Security Attacks in S-WBANs on IoT-based Healthcare Applications

Nov 2019

- **Published in a Scopus-indexed journal ([IJITEE](#)).**
- Reviewed 40 existing Smart Wireless Body Area Networks (S-WBANs) and assessed their vulnerabilities.
- Identified flaws in current methods of remote computer-assisted rehabilitation and their impact if compromised within IoT-based systems.
- Proposed novel blockchain-based S-WBANs to address some of the vulnerabilities of the existing networks pertaining to data privacy and security.

Presentations & Recognitions

- Presented at the 5th IEEE Conference on Dependable and Secure Computing ([SICSA Event](#)), where it won
 - **3rd place** in the Poster Category.
 - **‘Outstanding Woman in Cyber’** award
- First Place Winner at HackOnFest 2020.
- 2022 SheLeadsTech Ambassador for ISACA.

Certifications & Courses

GIAC Enterprise Vulnerability Assessor (GEVA) – SEC460

- Was Virtual Moderator for the course during the SANS Cyber Defense India 2022 Event.
- Exam scheduled for October'22.

MTA Security Fundamentals (Microsoft)

Security layers, Authentication, authorization & accounting, Security policies, Network security, Protecting Server & Client.

Ethical Hacking (Internshala)

Information gathering, web VAPT, OWASP, SQL injections, advanced web application attacks, client-side attacks, identifying security misconfigurations, exploiting outdated web applications, automating VAPT, secure code development, documenting & reporting vulnerabilities.

Extra-curricular and Volunteer Work

- Member of the Electronic Frontier Foundation that focuses on digital privacy, free speech, and innovation.
- Participant of Core NetWars Tournament 8 - SANS Asia Pacific Regional July 2022.