Serene Mathew



in Serene's Linkedin☑ serenemat@gmail.com♀ Serene's Github

Education

Master of Science in Applied Cyber Security

TU Dublin

Master's degree program

Coursework: Digital Forensics, Malware analysis, Cryptogram

Sept 2024 – Aug 2025 (expected)

Coursework: Digital Forensics, Malware analysis, Cryptography, Network Security, Application Security, Research Skills and Ethics

GPA: 3.5/4

Master of Science in Computer Applications

VTU, Bangalore

Masters's degree program

May 2015 – August 2019

Thesis: Breast Cancer Classification Using Neural Network (Published)

Identification of Breast cancer severity using Neural networks

Course Work: Big Data Analytics, Advanced Java and Enterprise Architecture,

Computer Networks, Data Warehouse and Data mining, Machine Learning Techniques

GPA: 8.85/10

Bachelor of Science in Computer Applications

Bangalore North University

Bachelors's degree program

May 2015 – August 2019

Course Work: Digital Electronics, Unix Shell Programming, Visual Programming,

Microprocessor and Assembly Language, Theory of Computation, Computer Architecture

GPA: 8.63/10

Projects

DFIR: Lonewolf Jan 2025

TU Dublin

- Conducted a digital forensic investigation using tools like Autopsy and FTK Imager to analyze memory and disk images.
- Uncovered 5–8 IoC's through analysis of deleted files, browser history, and encrypted communications.

Enhancing IDS to counter Slowloris Attack

Nov 2024

TU Dublin

- Developed custom Suricata IDS rules to detect and mitigate Slowloris attacks, achieving a 75% reduction in exposure.
- Tested advanced evasion techniques and recommended Nginx adoption for improved server resilience.

Revisiting Lightweight Cryptography of IOT Architecture

Nov 2024

TU Dublin

- Implemented and benchmarked hybrid encryption methods (AES-ECC-GCM, RSA-EEC-EAX) for resource-constrained IoT devices.
- Presented findings to 200 peers, identifying optimal encryption models for secure, energy-efficient data exchange.

Technical skills

Programming LanguagesGO, Power Shell Script, Bash shell script, Python, KQL, SQL, Java,

JavaScript

Analysis and Defence SoftwaresAutopsy, Network Miner, SIEMs, Splunk, Kibana, Suricata IDS, Snort,

Sn1per, Elastic, Wazuh, Shodan.io, DNS Dumpster, Wireshark, PE

studio, PE bear, DIE, ATT&CK Navigator

Frameworks MITRE ATT&CK, MITRE D3F3ND, T-Pot Honeypot

Zerodays CTF 2025

Croke Park, Dublin

- Took part in ZeroDays CTF, solving challenges across web exploitation, reverse engineering, forensics, and cryptography, contributing to a team ranking in the top 25% of participants.
- Developed hands-on cybersecurity skills in vulnerability exploitation, OSINT, and secure coding practices.
- Collaborated with a team to analyze and exploit real-world security flaws under time constraints.

TU Dublin Ethical Hacker Society - Member

2024 – present

TU Dublin

- Engaged in ethical hacking workshops, security challenges, and hands-on labs focused on penetration testing and exploit development.
- Collaborated with peers on CTF challenges, vulnerability research, and secure coding practices.
- Attended guest lectures and training sessions on offensive and defensive cybersecurity techniques.

Extra Courses

• Python Essentials 1 (Cisco Networking Academy)

• Foundations of Operationalizing MITRE ATT&CK v13 Certificate (AttackIQ)

• Top ATT&CK Techniques Certificate (AttackIQ)

• Intro to Splunk (Splunk e-learning)

• SOAR Analyst (Google SecOps)

• Penetration Testing and Ethical Hacking (Cybrary)