

NIRMAL BANDARA

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EDUCATION

B.Sc. (Honours) in Computer Science and Engineering

2023 – Present

University of Moratuwa, Moratuwa, Sri Lanka

Expected Graduation: 2028

- **Cyber Security Stream** – Currently in 3rd year of study, specialising in Cyber Security
- **GPA: 3.62**
- **Dean's List** – Achieved in Semester 1 for academic excellence
- Relevant coursework: Cyber Security, Operating Systems, Computer Networks, Database Systems, Computer Architecture

G.C.E. Advanced Level – Physical Science Stream (Mathematics)

2020 – 2023

Kegalu Vidyalyaya, Kegalle, Sri Lanka

- **Results: Combined Mathematics (A), Physics (A), Chemistry (A)** – All three A passes
- **Z-Score: 2.8080 | District Rank: 1st | Island Rank: 43rd**

TECHNICAL SKILLS

Cybersecurity: Network Security, Vulnerability Assessment, Secure Software Engineering, Digital Forensics, Cryptography, Authentication & Authorization, Web Application Security

Security Tools: Nmap, Wireshark, Burp Suite, Nessus, OWASP ZAP, Metasploit, Hashcat

Programming & Scripting: Python, Go, Bash, SQL, C, C++, Java, JavaScript

Networking & Systems: Linux, TCP/IP, DNS, HTTP/HTTPS, REST APIs

Platforms & DevOps: Docker, Git, GitHub, GitHub Actions, AWS, Google Cloud, PostgreSQL

SELECTED CYBERSECURITY PROJECTS

SecureScan – API-Managed Network Scanning Platform | *Individual Project* | *Go, Next.js, PostgreSQL, Docker* | GitHub

2026

- Developed a secure network-scanning platform that combines an asynchronous Go-based scanner with backend APIs, persistent scan management, authentication and authorization controls, audit logging, and a web interface.
- Implemented security mechanisms including target and port validation, scan limits, role-based authorization, target-access controls, safe error handling, structured logging, transactional audit events, and protections against unsafe internal/private target access.

AgentShield – AI Agent Security Project | *Individual Project* | *AI Security* | GitHub

2026

- Developing an AI-agent security gateway with controls for prompt-injection detection, PII detection, tool-permission validation, URL validation, and output guarding.
- Designed policy enforcement and audit logging to restrict unsafe or unauthorized interactions between AI agents, external tools, applications, and resources.

Nemo – Cross-Platform File Hiding & Digital Forensics CLI | *Academic Group Project* | *Go, NTFS, APFS, ext4, SHA-256, Cobra* | GitHub

2026

- Co-developed a command-line digital forensics tool capable of hiding, detecting, and clearing hidden data across multiple filesystem types including NTFS, APFS, and ext4.
- Worked with filesystem-level techniques such as named streams, extended attributes, slack space, and timestamping, while incorporating SHA-256 integrity verification and chain-of-custody logging for forensic operations.

Password Strength Analyzer | *Individual Project* | *Python, Tkinter, REST API, Hashing* | GitHub

2026

- Developed a Python application that evaluates password strength using structural and security-based checks.
- Integrated the Have I Been Pwned service using its k-Anonymity approach to identify compromised passwords without transmitting the user's plaintext password. Implemented responsive background API processing and common-password detection.

- Encryption Decryption Tool (Individual Project) | Python, AES-GCM, RSA, Docker | GitHub2026
- Implemented AES-256 symmetric encryption, RSA-2048 asymmetric encryption, and hybrid encryption combining RSA key protection with AES data encryption.
 - Containerised with Docker for portable and reproducible deployment across environments.

CYBERSECURITY ACTIVITIES & ACHIEVEMENTS

- Capture the Flag CompetitionsFinalist
- Cybersecurity CompetitionsOngoing
- Participated in multiple cybersecurity CTF competitions, reaching final rounds and achieving **Top 5 placements**.

- National Mathematics Olympiad
- Achievement2019

CERTIFICATIONS

- Google Cybersecurity CertificateJan 2026
- Google
- AWS Academy Cloud FoundationsFeb 2026
- Amazon Web Services Academy

ADDITIONAL EXPERIENCE

- Mathematics Teaching & Educational Content
- Advanced Level Mathematics2023
- Conducted mathematics teaching and seminar activities for Advanced Level students and created educational content focused on Combined Mathematics.

LANGUAGES

Sinhala: Native | English: Proficient