

Idrees Roshan, BSc

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Software Engineer transitioning into Cybersecurity, with firsthand experience in full-stack development, network security and secure software design. Secured vulnerable networks using industry best practices. Successfully developed and applied threat detection measures, security hardening techniques, and cryptographic solutions, applying frameworks like NIST, ISO 27001 and OWASP top 10. Now applying software engineering expertise to identify vulnerabilities, strengthen security controls, and protect organisations from cyber threats.

Skills

Technologies: Kali, Ubuntu, Splunk, Wireshark, tcpdump, Hashcat, Metasploit, Nmap, Git, PowerShell

Programming Languages: Python, SQL, Java, HTML/CSS, JavaScript, C++, C#, bash, Git bash

Soft Skills: Team Player, Growth Mindset, Critical thinking, Problem Solving, Technical Documentation

Security: Security Frameworks, Vulnerability Management, Incident Response, Security Hardening

Experience

Cyber Security Student | Full Time

Jan 2025 – Present

- Current certifications completed and in progress:
 - BCS Certificate in Information Security Management Principles** exp. March 2025
 - TryHackMe SOC level 1** exp. Feb 2025
 - [Google Professional Cybersecurity certificate](#) Jan 2025
 - Qualys Vulnerability Management** Jan 2025

Tencent | Game Tester

Nov 2024

- Identified and reported over 50 bugs, performance issues, and UI inconsistencies through manual testing, enhancing the quality of the pre-release software.
- Documented test results and collaborated with developers to produce significant improvements to software quality and establish a smooth user experience upon launch.

Teragence | Software Engineer Internship

Sep 2023 – Oct 2023

- Developed and maintained containerised application using Docker, streamlining deployment, and increasing system scalability.
- Analysed large datasets from over 1 million cell towers in the UK, optimising data processing and providing valuable insights that informed strategic decisions.
- Delivered a software presentation and assisted with a demo to multiple tech companies, effectively displaying the product's capabilities and fostering potential partnerships.
- Actively updated software and tested functionalities, ensuring robust and secure system performance, which minimised downtime and maintained service reliability.

KL2C Nottingham Hospital Charity | Software Engineer

Oct 2022 – May 2023

- Led the development of a paediatric peripheral eye test application using Unity, C#, and Python, ensuring secure and scalable code practices in the healthcare domain.
- Managed a Git repository with over 200 commits as Git leader, establishing seamless version control and collaboration among 7 developers.
- Followed Agile methodologies and used collaboration tools like Slack and Trello to boost project management efficiency and adaptability to changing requirements.
- Coordinated presentations of the software to 100+ industry professionals, effectively communicating technical concepts to non-technical stakeholders.
- Contributed to backend development and integration, resolving complex challenges that improved system performance and strengthened security.

Projects

Network Security Hardening Simulation and Report

- Conducted a security assessment using red team methodologies to identify vulnerabilities in a Linux-based server.
- Exploited misconfigurations using Metasploit's 'ProFTPD ModCopy Exec' exploit on Kali Linux to gain unauthorised access and extract critical documents.
- Cracked password hashes with Hashcat, demonstrating the importance of strong authentication measures.
- Implemented blue team security enhancements enforcing NIST 800-53 guidelines, including strong password policies, automatic updates, Firewall hardening, and the least privilege principle for Sudo access.
- Secured communication protocols by replacing Telnet with SSH and recommending SIEM tools and MFA for improved monitoring and defence.

AES-GCM

- Fully implemented AES-GCM encryption in java with Gradle, including comprehensive unit testing to deepen my understanding of cryptographic algorithms and guarantee security and reliability of the implementation.

Visual Field Test for Children

- Built in Unity with C#, incorporating a custom range finder library to calculate user distance from the screen, to achieve consistent testing conditions.
- Applied Agile/DevSecOps practices throughout the project lifecycle, conducting threat modelling during sprints to pre-empt unauthorised data access and facilitated iterative development and continuous feedback to meet user requirements.
- The software has since become a research tool for PhD students.

Portfolio Website

- Developed a responsive portfolio website using HTML, JavaScript, and CSS to highlight career achievements, education, and technical projects.

Education

University of Nottingham | *BSc Computer Science*
Mill Hill County High School | *A levels and GCSEs*

Oct 2021 – Dec 2024
Sep 2014 – Jun 2021

- A-Levels: Mathematics (A*), Further Mathematics (A*), Computer Science (A)
- GCSEs: 9 GCSEs, Mathematics (9), English Language (7)

Activities and Interests

Sports

- Volleyball Captain and MVP at the University of Nottingham, led the team to a division promotion.
- Climbed Mount Snowden and Scafell Pike, highest points in England
- Interest in football, basketball, rock climbing/scrambling and motorsports.

Languages

- English (primary language) and Farsi (native/heritage language).