Idrees Roshan

idrees.roshan@outlook.com | 07478768892 | linkedin.com/in/idreesroshan | Portfolio Website

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 and strengthened my security knowledge and proficiency with technologies such as Splunk and Wireshark by completing the Google Cybersecurity Certificate. Successfully developed and applied threat detection measures, security hardening techniques, and cryptographic solutions, applying frameworks like NIST, ISO 27001 and OWASP top 10. Led technical projects and vulnerability assessments for a paediatric healthcare application in an agile environment and collaborated with teams to build resilient systems. Now applying software engineering expertise to identify vulnerabilities, strengthen security controls, and protect organisations from cyber threats.

Education

University of Nottingham | *BSc Computer Science*   **Oct 2021 – Dec 2024**

Mill Hill County High School | *A levels and GCSEs*   **Sep 2014 – Jun 2021**
- A-Levels: Mathematics (A*), Further Mathematics (A*), Computer Science (A)
- GCSEs: 9 GCSEs, Mathematics (9), English Language (7)

Experience

Cyber Security Student | Full Time   **Jan 2025 – Present**
- Current certifications completed:
  - CompTIA Security+   In Progress (exp. March 2025)
  - Google Professional Cybersecurity certificate   View Certificate
  - Qualys Vulnerability Management   View Certificate

Tencent | Game Tester   **Nov 2024 – 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.
- Utilised **GIS** tools to manage and analyse 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.
- Structured content to highlight full-stack development expertise, including detailed case studies of cybersecurity initiatives and software engineering work.
- Integrated **GitHub Pages** for deployment, enforcing clean version-controlled updates and seamless accessibility.

Skills

Programming Languages: Python, SQL, Java, HTML/CSS, JavaScript, C++, C#, bash, Git bash
Technologies: Kali, Ubuntu, Splunk, Wireshark, tcpdump, Hashcat, Metasploit, Nmap, Git, PowerShell
Other: Vulnerability Management, Incident Response, Security Frameworks, Security Hardening

Activities and Interests

Sports: Volleyball Captain and MVP at the University of Nottingham, led the team to a division promotion. Interest in football, basketball, and motorsports.
Languages: English (primary language) and Farsi (native/heritage language).