

Richard Waters

 Liverpool, UK

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 [GitHub](#)

Profile

Experienced **Cybersecurity Engineer & Penetration Tester** with over 10 years in full-stack software development, AI integration, and offensive security. Passionate about building custom security tooling and helping businesses identify vulnerabilities through real-world attack simulations. Strong background in red teaming, ethical hacking, and vulnerability management. Currently pursuing **CompTIA Security+** and **Microsoft Azure Fundamentals** certifications.

Philosophy

“The code is not the problem — the teaching is the problem.”

Adaptability, curiosity, and feedback interpretation matter more than any single language or tool. I apply this mindset across cybersecurity, AI, and development — always striving to improve systems, people, and security posture.

Core Technical Skills

Security & Testing: OWASP ZAP, Burp Suite, Social Engineering, Phishing Simulations, Penetration Testing, Custom Python Security Tools, Red Teaming

AI & ML: TensorFlow, OpenCV, scikit-learn, Reinforcement Learning, Hugging Face, Pandas, NumPy

Languages: Python, JavaScript, PHP, C++, Java, Kotlin, Rust, Go, C#

Frontend & Backend: React, Next.js, Tailwind, Node.js, Express, Django, Flask, Laravel, .NET Core

Cloud & DevOps: GitHub Actions, Docker, Kubernetes, Azure, AWS, Google Cloud, Vercel, BitBucket

Databases: MongoDB, PostgreSQL, MySQL, Firebase, Neo4j, Prisma

Platforms & CMS: Shopify, WordPress, Custom CMS

Projects

PassSmash — *Cybersecurity | Next.js, Python*

Password cracking simulator demonstrating real-time brute-force and dictionary attacks. Integrated educational interface to raise awareness of password vulnerabilities.

LumaScope — *AI + Healthcare | Next.js, Python, TensorFlow*

Web app for Leukemia detection through blood sample image classification. Integrated dynamic model retraining to improve accuracy with each new upload.

OWASP Gamified Platform — *Security Education | Flask, React*

Developed interactive labs teaching OWASP Top 10 through gamified challenges. Used by junior security analysts for hands-on training.

Work Experience

Senior Software Developer | Club L London | Manchester | 2022 – 2025

Built scalable Node.js + MongoDB systems for Shopify syncing and automation. Designed CI/CD pipelines using Docker and GitHub Actions. Integrated 3rd-party APIs and improved backend security. Collaborated across teams for seamless delivery.

Cybersecurity Engineer | ShadowFox Security | Remote | 2021 – 2022

Led penetration testing engagements and red team simulations. Built automated scanning workflows using ZAP, Burp Suite, and custom Python scripts. Delivered high-quality reports and remediation plans.

Software Developer | Liverpool Hope University | Liverpool | 2020

Created a PHP-based form system for budget and grant applications. Prioritized usability and secure data handling. *Commissioned by the Head of Computer Science while assisting during my time at Velstar.*

Frontend Developer | Velstar | Liverpool | 2019 – 2020

Developed custom Shopify themes for retail clients (e.g. French Connection, Castore). Built customer-facing tools for QR discounts and loyalty programs.

Full-Stack Developer | Tornado | Liverpool | 2017 – 2019

Created WordPress plugins and full-stack apps for councils and charities. Built CRM tools for rent management, automating workflows and reporting.

Education & Certifications

BSc (Hons) Computer Science – First Class Honours

Liverpool Hope University – 2020

Certifications:

- CompTIA Security+ (*In Progress*)
 - Microsoft Azure Fundamentals (*In Progress*)
 - Preparing for CHECK Team Member (CTM)
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Extras

- Contributor to open-source security tools
- Speaker at local dev and cybersecurity meetups
- Continuous learner in AI and cloud-native security practices
- Eligible for UK Security Clearance