Huzaifa Ambakhutwala

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LinkedIn | GitHub | Portfolio

Professional Summary

Software Engineer with 2+ years at HP building secure, high-performance enterprise systems using C#, .NET, and TPM. Specialized in firmware validation, CI/CD security, and automation scripting. Skilled in backend development, cloud services, and secure SDLC, with a passion for creating robust, production-ready software.

Skills

Languages & Frameworks: C#, .NET Core, Python, C++, SQL, PowerShell
Security Tools: Nessus, Metasploit, Burp Suite, Wireshark, Kali Linux, Nmap
DevOps & Cloud: Azure DevOps, Docker, AWS (IAM, EC2, Lambda), Jenkins, Git
Security Concepts: TPM, Secure Boot, Penetration Testing, Encryption (RSA, AES), Vulnerability Management, Static/Dynamic Code Analysis
Methodologies: OWASP Top 10, NIST Framework, CIS Benchmarks, Secure SDLC, Threat Modeling

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Professional Experience

Security Software Engineer – *HP Inc.* — Houston, TX
Feb 2023 – Oct 2024

- Engineered firmware validation features using C#/.NET and TPM cryptography, securing over 500K enterprise devices.
- Automated security testing pipelines using NUnit/XUnit in Azure DevOps, increasing pre-release vulnerability detection by 45%.
- Developed PowerShell scripts to validate patches and integrated them into CI/CD workflows, reducing manual testing by 30%.
- Led static and dynamic code analysis using Nessus, Wireshark, and open-source tools, cutting critical vulnerabilities by 35% per release.
- Partnered with cross-functional teams to implement secure boot protections and TPM integrations for endpoint integrity.

Security Software Intern – *HP Inc.* — Houston, TX
Jun 2022 – Jan 2023

- Built a TPM-integrated device integrity tool using C++ and PowerShell; adopted for compliance use by internal security teams.
- Strengthened provisioning workflows by implementing cryptographic signing and verification mechanisms.
- Developed firmware monitoring logic to detect unauthorized BIOS changes, reducing undetected tampering cases by 25%.

Technical Projects

Portfolio Website – React, Vercel
Showcases personal projects, resume, and contact info in a clean responsive design.

Volleyball Stat Tracker – HTML/CSS/JS
Built tournament management app with team builder, live scoreboard, and player stat tracking.

Task Manager API – *Node.js, MongoDB, JWT, Fast API*
Developed a secure task management API with RBAC, token-based authentication, and encrypted storage; deployed for internal DevOps tracking.

TPM Device Verification Tool – *C++/PowerShell*
Created a TPM-backed standalone application for validating system integrity using signed firmware metadata.

CI/CD Security Bot – *Azure DevOps, PowerShell*
Automated OWASP Top 10 scanning and alerting in CI/CD pipelines, reducing remediation time by 20%.

Certifications & Training

Certified Ethical Hacker (CEH) – EC-Council, 2024
Managing Security in Google Cloud Platform – Google, 2023
Cybersecurity Compliance & System Administration – University of Maryland, 2022
Usable Security & Python Programming – Google, 2022

Volunteer Experience

Dana Committee Lead – *Anjuman-E-Shujaee, Houston, TX*
2021 – Present

- Coordinated logistics for 25+ annual events, each serving 1,500+ people.
- Introduced operational improvements that boosted food packing efficiency by 40%.

Additional Information

- Languages: English, Urdu, Hindi, Gujarati
- Open to relocation or remote opportunities
  GitHub Portfolio: GitHub