Mohit Aphale

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I am looking for opportunities across Europe/US in Cybersecurity Domain. I am open relocate and remote work.

Professional Summary

Overall 7+ years of experience in cybersecurity across IT and critical information infrastructure industries. Experience includes securing IT infrastructure and driving '**Secure by Design**' framework across all stages of concept phase and product development. Technology exposure includes Embedded Devices, web applications, mobile applications, thick clients, IoT devices and APIs including direct experience with most international standards in critical infrastructure security.

Work Experience:

Elektrobit India (May 2020 – Present) - Senior Security Specialist

Establishing cross departmental secure development, technical roadmaps and technology adoption oversight. Providing support to product teams charged with design and development of secure applications, systems and software for automotive controllers and supported infrastructure which includes Web Application, APIs.

Automotive Cybersecurity Process

- Implement and drive the cybersecurity concept at the vehicle/component level in accordance with ISO 21434, SAE J3061
- Executing TARA, cybersecurity goals and requirements for Embedded devices and software components
- Drive Engineering Software OTA security design and analysis
- Develop procedures for OEM and suppliers (Cybersecurity process gap analysis, TARA, software security requirements, cybersecurity goals, Developer Interface agreement)
- Provide consulting to OEM, Suppliers and internal teams as a technical expert in cybersecurity matters

Penetration Testing and Vulnerability Assessment

- Established dedicated lab environment for fuzz testing on Web Applications, protocols, vehicle modules like Ethernet, WIFI, Bluetooth, USB and other software components.
- Attacks on individual ECU functions such as OTA software updates, feature activation or diagnostics, privilege escalation, hardening, in-car apps/services
- Analysis of CAN bus, onboard diagnostics and communication technologies (fuzzing of UDS communication),
- Attacks on media interfaces (USB, Ethernet, WLAN), multimedia functions (e.g. attacks via manipulated MP3 files), other connections such as mobile communication, NFC, Bluetooth

Visteon Corporation (Sept 2017 – Dec 2019) - Embedded Security Engineer

Roles and Responsibilities

- Performed Penetration testing and Vulnerability Assessment on Automotive devices
- Responsible for executing TARA, cybersecurity goals and reviewing supplier/OEM requirements for Automotive devices and software components
- Responsible for designing Cybersecurity plan and test cases for performing security testing
- Triage risk of identified vulnerabilities and findings.
- Automate static code analysis, port scanning, fuzz testing, TARA using python scripting
- Perform Secure Code analysis of Web Application, thick Clients and Embedded Software

Aujas Networks (April 2015 – May 2017) – Security Consultant

- Perform Secure Code review for applications (Thick Client, Web and Android applications)
- Vulnerability Assessment and Penetration testing of applications by manual and automated approach.
- Attacks like Buffer Overflow, Heap Overflow, Use After memory, SQL injection, XSS, Deserialization on web applications, binaries, host.

HandsFree Networks (March 2014 – Jan 2015) – Product Engineer

- Vulnerability Assessments for web applications
- Perform Secure Code Review for web application
- Training developers on Secure Code guidelines and methodologies.

Professional Expertise

Programming Languages	Python, JAVA, PHP, C
Tools	IBM AppScan Source for Analysis, Burp Suite, CheckMarx, FlawFinder, Kali Linux, Nexpose, Coverity, Synopsys Defensics, HP-WebInspect, Wireshark, Binwalk, Radar2, wFuzz, nmap, Ubertooth, Wifi-Pineapple, sqlmap, dirbuster, Ghidra, nikto and more…
Frameworks / Standards	Vehicle Security Standards **ISO 21434, SAE J3061, ISO 24089, ISO 27034** OWASP TOP 10, SANS TOP 25, WASC 2.0, CVE/CWE, CERT, OSTMM, PTES
Subject of Interest	Secure by Design, Cryptography, Hardware Analysis, Reverse Engineering Threat Analysis and Risk Assessment (TARA), Application Security
Professional Certifications	Offensive Security Certified Professional (OSCP) Perusing – CPSA and OSCE

Education

Bachelor of Engineering in **Information Technology** (LNCT-S Bhopal) 2009 – 2013
Post Graduate Diploma in **Cyber Security** (C-DAC Bangalore) 2013 – 2014

Languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken Production	Spoken interaction	
ENGLISH	C2	C2	C1	C1	C1
DEUTSCHE	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

Projects

CVE-Newsletter

CVE Newsletter is developed in Python which will search for newly updated CVE's for a list of selected components/packages and send out a security newsletter to development and security teams.

Threat Assessment and Risk Analysis Tool

Developed an application in python which will prepare Threat Analysis and Risk Assessment based assets present in an Embedded Device or Software. TARA generated will be based on very generic threats defined for an asset in a master database.

EMailSecure

This project was developed as part of assignment in Post Graduate diploma at C-DAC Bangalore. We developed an email service using JAVA. Objective was to develop a secure email web application.

InstantEval

Automated evaluation of programming tasks and assignments. Inspired by CodeChef and ProjectEuler. For use in educational as well as competitive environments.