

Oussama Saddati

Systems Security Researcher

Meknes, Morocco

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PROFILE

Systems Security Researcher with a background in electronics, industrial maintenance, and low-level computing. Focused on analyzing complex systems across multiple layers, from web applications and APIs to operating systems, executable binaries, embedded devices, and hardware interfaces.

EXPERIENCE

Independent Security Research | Remote | Present

Conducted independent security research on web applications, APIs, software systems, and embedded platforms through authorized vulnerability research programs, including HackerOne, Intigriti, and Huntr. Performed vulnerability analysis using manual testing, reverse engineering, static and dynamic analysis, debugging, source code review, proof-of-concept development, vulnerability reproduction, root cause analysis, and technical reporting methodologies. Research focus includes web and API security, authentication and authorization analysis, reverse engineering, firmware and embedded systems, memory safety, cryptography, and AI security evaluation.

Identified and analyzed vulnerability classes including:

Web and Application Security :

- Access control and authorization weaknesses
- Authentication vulnerabilities
- SQL injection
- Cross-Site Request Forgery (CSRF)
- Path traversal
- Improper input validation
- Sensitive information disclosure

System and Software Security :

- Memory safety vulnerabilities (out-of-bounds read, stack overflow, NULL pointer dereference)
- Improper error and exception handling
- Cryptographic implementation weaknesses

Computer Hardware Technician | Omega Computers | Meknes | 2 months | 2025

Performed hardware and software troubleshooting on computer systems, including component replacement, operating system installation, configuration, peripheral repair, BIOS firmware analysis, flashing, and recovery using SPI flash programmers.

Electronics Intern | Casa Maintenance | Bouskoura | 2 months | 2025

Worked on industrial electronic equipment maintenance, diagnostics, repair, and ECAD related activities. My responsibilities included preventive and corrective maintenance, electronic board troubleshooting, fault analysis, and supporting PCB design and development processes.

EDUCATION

- **DEUST** | Faculty of Science and Technology Béni Mellal | 2024
- **Baccalaureate** in Electrical Science and Technology | Lycée Technique Taza | 2018

SKILLS AND TOOLING

- **Programming Languages:** C · C++ · Rust · Go · Python · Bash · Java · x86 Assembly · ARM Assembly
- **Development & Analysis Tools:** GDB · radare2 · objdump · readelf · nm · strings · file · ldd · strace · xxd · checksec · Git · CMake · Cargo
- **Reverse Engineering & Binary Analysis:** ELF Analysis · Disassembly · Static Analysis · Dynamic Analysis · Binary Instrumentation · Symbol Analysis · Control Flow Analysis
- **Security Testing & Validation:** Clang/LLVM · AddressSanitizer · libFuzzer · AFL++ · Custom Testing Harnesses · Differential Testing · Crash Analysis
- **Systems & Virtualization:** Linux · Docker · QEMU · Android Emulator · Seccomp
- **Embedded & Android Analysis:** Embedded Linux · Firmware Analysis · ADB · JADX · Apktool · aapt/aapt2 · Bootloader Analysis · Device Interfaces · Frida
- **Systems & Network Tools:** OpenSSL · curl · jq · mitmproxy · REST · gRPC · JSON-RPC · HTTP/HTTPS
- **Hardware & Electronics:** Altium Designer · KiCad · Eagle · OrCAD · MATLAB · SPI · Flash Programmers · JTAG/SWD · CAN · I²C · SPI · UART · GPIO

PROJECTS

Embedded Firmware Analysis

Reverse engineered embedded firmware images, analyzed binaries, extracted filesystems, and investigated system components and interfaces.

Native Binary Analysis

Analyzed ELF binaries using static and dynamic techniques, tracing execution flow, symbols, memory behavior, and runtime interactions.

LLM Security Evaluation

Evaluated AI assistants against prompt injection, instruction handling, and information disclosure scenarios.

LANGUAGES

Arabic : Native

French : Professional

English : Professional