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Profile

Enthusiastic double degree student at ENSIMAG with a strong passion for cybersecurity. Demonstrates excellent teamwork and analytical skills, with a commitment to continuous learning and professional development in the field.

Education

- **Master's in Cybersecurity - Grenoble INP - Ensimag** (2024-2025) - France
- **Engineering Degree - Grenoble INP - Ensimag** - Information Systems Engineering (2022-2025) - France
- **Bachelor's Degree in Engineering - Grenoble INP - UGA** - Engineering Sciences (2022-2023) - France
- **Preparatory Classes for Engineering Schools (CPGE)** - Mathematics and Physics (2020-2022) - Morocco

Experience

Securing an IoT Platform Based on Raspberry Pi - Internship - LIG (*3 months, Grenoble, France*)

- Designed and implemented a security architecture for an IoT platform using Raspberry Pi nodes
- Established secure connectivity between nodes and server via VPN, with extension to WAN networks
- Implemented Secure Boot to ensure system integrity at startup
- Developed a methodology for managing verified programs to ensure exclusive execution of secure images on nodes
- Conducted in-depth analysis of security features of Raspberry Pi SoCs (System on Chip)
- Optimized secure boot processes and enhanced network security of the platform
- Created a functional proof of concept demonstrating complete securitization of the boot chain

Projects

Project: Compiler Implementation

- Designed and developed a robust Deca compiler in a team of 5 members, using Java.
- Implemented lexical, syntactic, and semantic analyzers.
- Generated secure assembly code, incorporating protections against common vulnerabilities.

JPEG Decoder Project in C

- Implemented robust JPEG decoding algorithms resistant to malformed inputs in a team of 3.
- Developed secure processes for decomposition and reconstruction of high-resolution images.
- Enhanced skills in secure C programming, Git, and file processing.

Operating System Project

- Designed and developed a minimalist operating system for 32-bit x86 PC architectures.
- Implemented interrupt handling, process scheduling, threads, semaphores, and virtual memory management.
- Utilized Git, C language, Assembly, and applied processor architecture concepts.

Technical Skills

- **Programming Languages:** Python, Java, C, Bash, JavaScript
- **Security Tools:** Wireshark, Burp Suite, OWASP ZAP, Ghidra
- **Tools and Environments:** SQL, DevTools, Git, Linux, Windows, Cryptography , Network

Certificates and Training [Certifications and Acquired Skills](#) [↗](#)

- Information Security Fundamentals - Hack The Box Academy
- Operating System Fundamentals - Hack The Box Academy

Languages

English: Advanced **French:** Fluent **Arabic:** Native Language

Behavioral Skills

Continuous Learning, Analytical Thinking, Attention to Detail, Team Spirit

Interests

Football, Capture the Flag (CTF), Cybersecurity, Programming