Rayane Boucheraine

SECURITY RESEARCHER

CONTACT

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PROFILE

Security researcher focused on smart contracts, blockchain protocols, and distributed systems. I work across Solidity/EVM, Rust/Solana, and Cosmos/DLT with Go through audits, bug bounties, protocol research, and CTF competitions. I learn unfamiliar systems quickly, trace execution and state transitions, and investigate vulnerabilities to their root causes. My interests include low-level systems security, virtual machines and compilers, and protocol security across EVM internals, consensus, validator infrastructure, and cross-chain systems. I combine strong computer science fundamentals, systems programming, and security research to solve difficult technical problems.

WORK EXPERIENCE

Independent Security Researcher | 2025 – Present

Smart Contract & Protocol Security

- Review Solidity/EVM, Rust/Solana, and Cosmos/DLT codebases for smart-contract, protocol, and infrastructure vulnerabilities.
- Analyze execution paths, state transitions, and protocol logic, then validate and report security findings.

CTF Competitor | 2023 – Present

CascRooT Team

- Participate in CTF competitions across multiple security categories, with a focus on blockchain, cryptography, and web exploitation.
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- Apply vulnerability analysis, scripting, Linux, and exploit-development skills in competitive environments.

MyQCM Aljazayr | 2023 – 2025

Co-Founder & CTO

- Led the technical development of an educational platform.
- Built the core system; ranked second nationally at the Edutec Challenge.

EDUCATION

ESTIN — National School of Computer Science and Technologies | 2023 – 2028

Engineering Degree in Computer Science — Expected 2028

- Built a strong foundation in algorithms, data structures, software engineering, mathematics, probability, and logic.
- Developed problem-solving skills through complex programming assignments and technical projects.
- Gained experience with systems programming, computer architecture, operating systems, and networking concepts.
- Applied computer science principles across cybersecurity, artificial intelligence, and software development projects.

ACTIVITIES & LEADERSHIP

Nexus Security Club | 2025 - Present

President

- Lead the university cybersecurity community, organizing workshops and CTFs that strengthen problem-solving, systems thinking, and practical security skills.
- Mentor members through collaborative projects, helping them learn unfamiliar technologies quickly and communicate technical ideas clearly.

SKILLS

Security Research:

- Smart contract and protocol auditing, vulnerability analysis, proof-of-concept development, reverse engineering, and CTF competitions

Blockchain Security:

- Solidity/EVM, Rust/Solana, Cosmos/DLT, protocol analysis, execution flows, and state transitions

Programming & Systems:

- Rust, Go, Solidity, Python, Bash, Linux, TypeScript, JavaScript, and working knowledge of C

Research Interests:

- Low-level systems security, virtual machines, compilers, consensus, validator infrastructure, cross-chain systems and ZK proofs

LANGUAGES

- **English — Fluent**
- **Arabic — Native**
- **French — Good**