

RAHMA MIHOUB

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Nancy, France

<https://rahmamhb.github.io/>

PROFESSIONAL SUMMARY

Cybersecurity engineering student at ESTIN, Bejaia, Algeria with foundational knowledge in network security, cryptography, and machine learning. Currently conducting research on network digital twin calibration at Laboratoire CRAN, which has provided exposure to working across different technical domains. Open to research opportunities that allow me to continue developing expertise in cybersecurity and related areas.

EDUCATION

Master and Engineering Degree in Cyber Security

Engineering School of Computer Sciences and Digital Technologies of Bejaia (ESTIN)
Bejaia, Algeria | October 2021 - September 2026 (Expected)

- Final year cyber security student, **ranked top 3 in class**
- Relevant Coursework:** Network security, Ethical hacking, Intrusion and Defence techniques, Advanced cryptography, Data anonymization, Data science fundamentals, and Machine learning

Scientific Baccalaureate with High Honors

Messaoud Chaalel Secondary School
Guelma, Algeria | September 2018 - June 2021

PROFESSIONAL EXPERIENCE

Research Intern

Laboratoire CRAN, University of Lorraine
Nancy, France | January 2026 - Present

- Conducting data-driven calibration of simulation parameters to enhance the accuracy of a network digital twin
- Executing simulations in Cooja (Contiki-NG) and real-world experiments on FIT IoT-LAB to validate and refine network models
- Invited to present a research seminar at the ICube lab (Université de Strasbourg)

Computer Network Intern

Air Algerie
Annaba, Algeria | July 2025

- Analyzed the impact of user practices on network performance and identified opportunities for improvement

Computer Network Intern

Algerie Telecom
Guelma, Algeria | June 2024 - July 2024

- Configured and optimized network infrastructure, including the integration of Active Directory for centralized user management

SKILLS

Cybersecurity (Core)

Network defense, threat hunting, log analysis (ELK Stack, Splunk), intrusion detection and prevention (Snort), vulnerability assessment, penetration testing, incident response

Network Simulation and IoT Systems

Cooja simulator, FIT IoT-LAB

Machine Learning and Data Science

Python (NumPy, Pandas, Scikit-learn), exploratory data analysis (EDA), anomaly detection

Programming and Development

Python, C, JavaScript, React, Node.js, Express, SQL, MongoDB, REST APIs, Git

Soft Skills

Public speaking, Leadership and teamwork, Time management, Adaptability, Problem-solving

PROJECTS

Keystroke Biometrics Authentication using DTW Algorithm

Academic Project | Technologies: Python

Developed a biometric authentication system using Dynamic Time Warping algorithm to analyze keystroke patterns

Mouhami-DZ Web Application

Academic Project | Technologies: React, Vite, Tailwind, JSON Server

Created a web application for legal services using modern frontend technologies

COMPETITIONS

DataBounty Datathon, CCSClub

Secured 2nd place in the cyber security section

Nexzero CTF, Nexus and FTC Club

Achieved a Top 10 placement in an on-site CTF competition

CERTIFICATIONS

- Cisco Network Defense
- SOC Level 1 - TryHackMe
- Junior Penetration Tester - TryHackMe
- 4G Network Fundamentals

VOLUNTEERING EXPERIENCE

Communication Department Manager

Bytecraft Student Club, ESTIN, Bejaia

August 2024 - September 2025

- Managed the launch of ByteCraft's first newsletter, coordinating a team of designers and editors to enhance member engagement

Moderator - Oral Sessions

17th International Conference on Optimization and Information Systems (COSI 2025)

ESTIN, Bejaia | June 2025

- Hosted the opening and closing ceremonies, engaging with international speakers and attendees

LANGUAGES

- Arabic - Native
- English - C1 (Advanced)
- French - B2 (Intermediate)
- German - A2

REFERENCES

Si-Mohammed Samir, PhD in Computer Science

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Daoudi Maroua, PhD in Computer Science

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