

HAROUN MOUSSA

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 Haroun Moussa

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PROFILE

Second-year Computer Science Engineering student at ENISo and Project Manager at Junior Entreprise ENISo (JEENISo). Passionate about Web and Mobile development, Blockchain, Artificial Intelligence, and Machine Learning, with solid hands-on experience gained through hackathons, as well as academic and professional projects. Skilled in project management, technical coordination, problem-solving, and delivering efficient, scalable, and real-world solutions.

SKILLS

Frameworks & Languages:	React, React Native, Spring Boot, Angular, Node.js, Python, Java, C, HTML/CSS/JavaScript
Databases:	MongoDB, PostgreSQL
AI & Machine Learning:	TensorFlow, CNNs, Transfer Learning (ResNet50), Computer Vision
Data Science & Optimization:	Genetic Algorithms (NSGA-II), Multi-Objective Optimization, Pareto Analysis, Scikit-learn, Matplotlib
Embedded & IoT:	Raspberry Pi 4, Camera Module, Edge AI
Blockchain & Web3:	Ethereum, Smart Contracts (Solidity), Web3, Ethers.js, Cryptography (AES-256), Private Key Management, Offline Transaction Signing, RPC Networks
Networking & Systems:	Cisco, TCP/IP, Linux
Data Science Tools:	Jupyter Notebook, Google Colab
Soft Skills:	Project Management, Agile/Scrum Methodology, Team Leadership, Communication, Problem Solving, Time Management

PROJECTS

Cryptowallet – Web3 Mobile Application

React Native, Blockchain, Web3

- Designed and deployed a private blockchain (*Nexora*) with a native cryptocurrency (NXR).
- Developed a non-custodial mobile wallet with multi-account support and dynamic RPC network switching.
- Implemented AES-256 encryption for secure local storage of private keys and offline transaction signing.
- Integrated Web3 standards using Ethers.js to interact with custom smart contracts.

Smart Waste Sorting Bin – Computer Vision Project

Python, Raspberry Pi, Deep Learning

- Designed an intelligent waste sorting system capable of classifying waste into seven categories using computer vision.
- Implemented transfer learning with pre-trained CNN models (ResNet50) for real-time image classification.
- Deployed the solution on a Raspberry Pi 4 integrated with a camera module for on-device inference.

E-Commerce Web Application – MERN Stack

MongoDB, Express.js, React, Node.js

- Designed and developed a full-stack e-commerce web application using the MERN stack.
- Implemented user authentication and authorization (JWT) with role-based access (Admin/User).
- Integrated RESTful APIs and MongoDB for data persistence.

- Built a responsive UI with React and modern CSS practices.

Advanced Algorithmics Project – Multi-Objective Optimization (MOGA) *Python, DEAP, Scikit-learn*

- Designed a multi-objective optimization approach using the NSGA-II genetic algorithm for Random Forest hyperparameter tuning.
- Balanced prediction accuracy and training time through Pareto-based optimization.
- Implemented the solution in Python with DEAP and Scikit-learn, including Pareto Front visualization.

PROFESSIONAL EXPERIENCE

Software Engineering Intern — Core Techs Solutions

June 2025 – August 2025

During this internship, I developed a mobile application for vehicle tracking with real-time data visualization and system integration. In parallel, I worked on hash table-based projects using Angular, Spring Boot, Java, Nuts, and PostgreSQL, strengthening my skills in full-stack development, data structures, and backend architecture.

Project Manager — JEENISO (Student Association)

June 2025 – Present

As a Project Manager at JEENISO, I oversee technical and organizational projects by defining project specifications, coordinating multidisciplinary teams, and managing timelines using the Scrum methodology. This role strengthened my leadership, communication, and project management skills while delivering innovative and community-driven initiatives.

EDUCATION

National Engineering School of Sousse (ENISO)

2024 – Present

Engineering Degree in Applied Computer Science

Pre-Engineering Preparatory Institute of Kairouan, Tunisia

2022 – 2024

Mathematics and Physics

Farhat Hached High School, Msaken – Sousse

2022

Baccalaureate in Mathematics

TRAINING & CERTIFICATIONS

NVIDIA Deep Learning Institute

Data Parallelism: How to Train Deep Learning Models on Multiple GPUs

NVIDIA Deep Learning Institute

Fundamentals of Deep Learning