

# Nadir Ben Halima

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## Education

### Ecole Polytechnique de Sousse - GFI

*Software Engineering (specialty in Data Science and AI)*

Sousse, Tunisia  
2023 - 2026

### École supérieure des sciences et de la technologie de Hammam Sousse

*Maths-Physics Preparatory Class for Engineering Studies*

Sousse, Tunisia  
2018 - 2022

### Tunisian Baccalaureate in Mathematics

*Honors: Good*

2018

## Experience

### Data Soft

*Website Development*

Sousse, Tunisia  
Summer 2023

- Developed an ERP extension for financial data transfer and tax compliance using UML.
- Debugged and optimized system functionality with WinDev 25.

### Société tunisienne de l'électricité et du gaz

Tunisia

Sousse,

*TurbineControl IoT Upgrade*

July ,Out 2022

- Developed and integrated an IoT service to monitor and control gas turbine systems in real time.
- Successfully migrated control logic from Mitsubishi PLC code to Siemens TIA Portal, ensuring full functionality and reliability of the gas turbine regulation system.

### Abajim

Claud & Security

July ,Out 2024

- Successfully migrated infrastructure from OVH to Amazon Web Services (AWS) to improve scalability and reliability.
- Led the transition process, ensuring seamless deployment, optimized performance, and minimal downtime.

### Multiverse IA

*AI & Full-Stack Development Intern*

June – September 2025

- Developed a full React.js web project from scratch as part of the internship training program.
- Worked on advanced Natural Language Processing (NLP), Retrieval-Augmented Generation (RAG), and Model Context Protocol (MCP) applications.
- Built and fine-tuned machine learning and deep learning models for intelligent data analysis.

## **Projects**

### **PFA-BigData & Machine Learning Project**

- Implemented Hadoop for large-scale data cleaning and processing.
- Developed a machine learning model using Apache Spark for predictive analysis.

### **Water Footprint Reduction Advisory Website**

- Built an Angular-based advisory website for sustainable water usage.
- Integrated an LLM chatbot for personalized environmental advice.

### **React Website for Industrial Machinery Company**

- Designed, developed, and hosted a company website using React.

### **Virtual Try-On Feature for Zen Clothing Brand**

- Implemented a virtual try-on feature using the OOTDiffusion model as part of IEEE challenges.
- Integrated the feature into Zen's mobile app, enabling users to visualize clothing in real-time.
- Stock Management System for Bank
- Developed a stock management system using JavaFX, Java, and MySQL.
- Features include inventory tracking, supplier management, and automated stock alerts.

### **Grocery Delivery App**

- Developed an Android grocery delivery application using Java and Material UI.
- Implemented user authentication and a seamless UI/UX.

### **School Management System**

- Developed a comprehensive school management system using Python, Tkinter, and MySQL.
- Features include student calendar management, class management, and a library module.

### **AI Oil Price Prediction & Advisory Platform**

- Developed a real-time oil price monitoring and forecasting web application using React.js, Next.js, FastAPI, and MCP
- Integrated a Retrieval-Augmented Generation (RAG) system for generating investment insights and financial analysis.
- Deployed machine learning and deep learning models to predict oil market trends and assist decision-making.

## Leadership & Activities

### IEEE EPS Student Branch

Member

Tunisia

2023 - Present

- Worked on various technical projects and ranked 2nd in the IEEE Xtreme Hub Competition.

### Founding Member of Microsoft IT Lab, ESSTHS University

Event Coordinator

Sousse, Tunisia

2022 - 2023

- Led event management efforts and facilitated tech workshops for students.

### IEEE Membership

Member

Tunisia

2021 - Present

- Participated in competitive programming contests and algorithmic challenges.

## Skills & Certifications

**Technical:** Python, Java, C, JavaScript, HTML & CSS, PHP, R, Flutter, C++, C# .NET, MEAN Stack, Docker, Apache Spark, Flask, REST APIs, Linux

**AI & Machine Learning:** LLM deployment, Prompt Engineering, RAG-powered chatbot development, Ollama, Hadoop, Data Warehousing

**Networking & Security:** Enterprise network setup, Security Protocols

## Certifications

- Microsoft Azure AI-900 (AI Fundamentals)
- CCNA 1 & 2 Certification (Cisco)
- BLS (Basic Life Support) Certification
- Securinet OSINT Formation
- 2nd Place - IEEE Xtreme Hub Competition (2023)
- Building Transformer-Based Natural Language Processing Applications (NVIDIA)
- Fundamentals of Deep Learning (NVIDIA)
- Intermediate to R
- Introduction to Data Science (Cognitive Class)
- Big Data (Cognitive Class)
- IBM Blockchain Foundation Developer (BC0201EN, provided by IBMDeveloperSkillsNetwork)
- Hadoop (BD0111EN, provided by IBM)
- Spark Fundamentals (BD0211EN, provided by BigDataUniversity)
- Supervised & unsupervised Learning with scikit-learn( Datacamp)

## Languages

**Arabic:** Native

**English:** Fluent

**French:** Fluent

**German:** Basic