

# Louay Nagati

Second-year Double Degree  
Student in Computer  
Engineering – Data Science at  
ESPRIT and BI/Big Data at 3iL  
Ingénieurs



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## PROFIL

Passionate about data science and innovative solution development, I master key technologies in AI, Machine Learning, LLMs, and Data Engineering. With hands-on internship experience, I have strong problem-solving skills and a collaborative mindset. I am currently seeking a **4-month internship** to apply my skills and contribute to impactful projects.

## COMPÉTENCES

- Programming:** Python, R, C, C++, Java, JavaFX, .NET
- Web Development:** Streamlit, Flask, FastAPI, React, HTML, CSS, JavaScript, PHP, Symfony, Laravel
- Data Science & AI:** Machine Learning, Deep Learning, NLP, LLM, Generative AI
- Web Scraping & Automation:** Selenium, BeautifulSoup, Scrapy
- Databases:** MongoDB, SQL, MySQL, Firebase, PostgreSQL
- Big Data:** Hadoop, Hive, HBase
- Visualization:** Power BI, Excel
- Scripting:** Shell (Linux)

## CERTIFICATIONS

- NVIDIA – Fundamentals of Deep Learning
- NVIDIA – Building Transformer-Based NLP Applications
- NVIDIA – Generative AI with Diffusion Models
- NVIDIA – Applications of AI for Predictive Maintenance
- 365 Data Science – Machine Learning in Python
- Coursera – Python for Data Science, AI & Development
- ChatGPT for Data Science
- 365 Data Science – Power BI

## LANGUES

- Arabic ● French ● English

## EDUCATION

- 3iL Ingénieurs**  
Engineering Degree in Computer Science, BI/Big Data  
2025 – 2027 | Limoges, France
- ESPRIT (École Supérieure Privée d'Ingénierie et de Technologies)**  
Engineering Degree in Computer Science, Data Science  
2021 – 2026 | Tunis, Tunisia
- BouSalem secondary school**  
Baccalaureate in Mathematics  
2020 – 2021 | Jendouba, Tunisia

## WORK EXPERIENCE

- Value**  
Data Science & AI Intern – ESG Analysis Platform  
06/2025 – 08/2025 | Tunis, Tunisia
- Designed and built an end-to-end platform for automated ESG report analysis, leveraging advanced **LLMs** and **RAG** techniques to extract key sustainability indicators.
  - Developed a robust **Python data processing pipeline** integrating **OCR** and **LangChain** to process heterogeneous document sources (PDF, text, scanned images).
  - Implemented intelligent matching and standardization algorithms to align extracted metrics with ESG taxonomies and frameworks.
  - Created an **interactive Streamlit dashboard** enabling real-time comparison and benchmarking of ESG performance across multiple organizations.
  - Improved the processing speed by 40 % compared to baseline manual analysis workflows.
- Medianet**  
Development & AI Intern – Recruitment Platform  
06/2024 – 08/2024 | Tunis, Tunisia
- Developed a **full-featured recruitment platform** using **Laravel (PHP)** and **MySQL**, enabling job posting, candidate management, and interview scheduling.
  - Implemented **AI modules** for automated CV parsing and pre-filling application forms, increasing recruiter efficiency and data quality.
  - Integrated a **chatbot assistant** powered by NLP models to support candidate–recruiter communication.
  - Added features such as real-time messaging, calendar synchronization, and notifications to enhance the user experience.
  - Contributed to the platform's deployment and testing in a production-like environment.

## PROJECTS

- Due Diligence – Web Document Analysis Platform**
- Development of a web application using **Streamlit** for the analysis and automatic extraction of information from complex documents, including **web scraping** modules to collect external data.
  - Implementation of advanced features: document parsing via **NLP**, automated report generation, and a **Human-in-the-Loop** chatbot powered by **LLMs** and a **RAG** pipeline.
  - Integration of a knowledge graph (**Neo4j**) and a document database (**MongoDB**), along with an automated presentation generation module using **Python-pptx**.
  - Project awarded **1st Prize – Data Science Category** at the ESPRIT Project Fair.
- Audio Data Augmentation using Diffusion Models - Deep Learning Project**
- Designed a **data augmentation pipeline** for audio signals using **DDPM** and **VAE** architectures to improve model generalization.
  - Processed raw audio into **mel-spectrograms** with **Librosa** for more effective training in **PyTorch**.
  - Trained and validated a **ResNet-50 classifier** to evaluate the impact of synthetic data on **emotion recognition** tasks.
  - Demonstrated measurable performance improvements compared to baseline datasets.
- Real Estate Price Prediction – Machine Learning Project**
- Developed a **multi-source web scraping pipeline** for **real estate data**.
  - Trained **Machine Learning models** (*Linear Regression, Random Forest, XGBoost*) and **selected the best** based on performance metrics.
  - Deployed the model in a **full-stack web application** (**Flask REST API + React** frontend + **secure authentication**).
- Customer Churn Prediction – Machine Learning Project**
- Built an **early detection system** for **at-risk customers** through **historical data analysis**.
  - Deployed the model in an **interactive Flask web application**, enabling **real-time visualization** of churn scores and **proactive risk management**.