Mayssem Saad

3rd Year Computer Engineering Student, specializing in Data Science and Actuarial Science | Seeking a Final Year Internship (PFE) starting January 2026

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📍 Tozeur, Tunisia

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👤 PROFIL

Third-year computer engineering student at ESPRIT, specializing in Data Science and Actuarial Science through a double degree program with the University of Le Mans. Passionate about machine learning and statistical modeling, with expertise in AI technologies and data engineering. Possessing an analytical mindset, strong problem-solving skills, and excellent adaptability. Rigorous, organized, and capable of working effectively in a team.

🧠 COMPÉTENCES

Programming Languages: Python, R, Java, C, C++, .NET, JavaScript, PHP, HTML, CSS

Databases & Big Data: SQL, MySQL, PostgreSQL, MongoDB, Neo4j, Firebase, Hadoop, Hive, Spark, HBase

Data Science & AI: Machine Learning, Deep Learning, NLP, LLM, GenAI, Rasa, Generative AI

AI Frameworks & Libraries: TensorFlow, PyTorch, Keras, Scikit-learn, Transformers, OpenCV

Actuarial & Finance: Actuarial Modeling, Solvency II, Monte Carlo Methods, Lee-Carter Model

Web Development & Frameworks: Streamlit, Flask, FastAPI, Symfony, NodeJS, NextJS, NestJS, React, JavaFX

Visualization & BI: Power BI, Tableau, Excel, Interactive Dashboards

Web Scraping & Automation: Selenium, Beautiful Soup, Scrapy

Scripting & System: Shell Scripting, Linux Bash

🎖 CERTIFICATIONS

- Fundamentals of Deep Learning ⍈
- Power BI ⍈
- Introduction to Transformer-Based Natural Language Processing ⍈
- Generative AI with Diffusion Models ⍈

🌐 LANGUES

Arabic (Native) | French (Fluent) | English (Fluent)

🎓 EDUCATION

Master in Actuarial Science
University of Le Mans
2024 – Present | Le Mans, France

Computer Engineering Degree, specializing in Data Science
ESPRIT (Private Higher School of Engineering and Technology)
2023 – Present | Tunis, Tunisia

Bachelor's Degree in Software Engineering and Information Systems
Higher Institute of Computer Science of Mahdia
2020 – 2023 | Mahdia, Tunisia

Scientific Baccalaureate – Mathematics
Abou Alkacem Chebbi School
2019 – 2020 | Tozeur, Tunisia

📁 WORK EXPERIENCE

June 2025 – August 2025 | ESG Platform Development (Internship) | Value
- Contributed to the development of an **ESG benchmarking** platform to collect, organize, and analyze sustainability reports.
- Designed a four-stream workflow (AI discovery, download, KPI extraction, benchmarking) with automated document processing in Python, combining PDFPlumber, PyTesseract, and Regex.
- Integrated **web scraping** techniques via BeautifulSoup and semantic matching with FuzzyWuzzy to enhance data collection.
- Developed an interactive dashboard using **Streamlit** connected to an SQL database for visualizing and tracking ESG indicators.

July 2024 – August 2024 | Task Management Web Application Development (Internship) | Allence
- Developed a task management web application for tracking, modifying, and collaborative task management.
- Implemented a user database with **PostgreSQL** and designed a full-stack architecture using **Next.js** (front-end) and **NestJS** (back-end).
- Optimized user experience by integrating dynamic features and a responsive interface.

💼 PROJECTS

Due Diligence – Document Analysis Web Application
- Developed a Due Diligence platform for automatic analysis and information extraction from complex documents.
- Implemented advanced features: document upload and parsing via **NLP** and **LangChain**, automated report and PowerPoint presentation generation with **python-pptx**, response classification and scoring, and a Human-in-the-Loop chatbot based on **LLMs** and a **RAG** pipeline.
- Enhanced analysis through visualization on **Streamlit** and structured storage in **MongoDB**, integrating time-series forecasting techniques for indicator projection.

Audio Data Augmentation using Diffusion Models - Deep Learning Project
- Generated augmented emotional audio data to improve the performance of emotion recognition systems.
- Preprocessed EmoDB and RAVDESS databases with **Python** and **Librosa**, transformed into mel-spectrograms, then trained a conditional diffusion model (**DDPM**) enhanced with emotional embedding and a **VAE**.
- Evaluated generated samples using a **ResNet-50** classifier and integrated the **CRISP-DM** methodology to structure the project.

Reserves and APV for Life Annuity - Actuarial Project
- Developed actuarial models using **R** and **StMoMo** to calculate reserves and APV for life annuity products
- Implemented **Lee-Carter mortality projections** and **Monte Carlo simulations** for Solvency II regulatory compliance

Customer Churn Prediction in the Telecommunications Sector - Machine Learning Project
- Developed a predictive model using **scikit-learn** to identify customers at risk of churn from historical data.
- Performed exploratory data analysis and transformation with **Pandas** and **NumPy**, then trained machine learning algorithms to improve prediction accuracy.
- Deployed an interactive tool using **Flask**, enabling real-time visualization of churn scores and proactive management of at-risk customers.

AI Doctor - Medical Advice Web Application
- Developed an e-health platform leveraging artificial intelligence to provide personalized medical advice.
- Designed an interactive representation of the human body and integrated a medical chatbot based on **Rasa** and **OpenAI's LLMs**.
- Full-stack architecture combining **NextJS** (front-end), **NestJS** (back-end), and **MySQL** for managing and securing patient data.