

Skills

Programming Languages: Python, C, C++, JAVA, R
Web Technologies: HTML, CSS, JS, PHP, Flask, Streamlit
Databases: SQL, NOSQL, PLSQL, FAISS

Big Data: Hadoop, Apache Spark, Data Mining
AI/ML: Scikit-learn, TensorFlow, NLTK, SpaCy, OpenCV, Transformers(Hugging Face), LangChain, LangSmith
Data Visualization Tools: Tableau, Power BI, Talend

Professional Experience

Generative AI intern Sofrecom Tunisia July2025–August2025
Hybrid RAG-SQL for Context-Aware Natural Language Processing | [Link](#)
Designed a hybrid retrieval engine combining semantic (vector-based) and structured (entity/keyword) search.
Built a smart generation orchestrator supporting 7 adaptive strategies (RAG, web search, SQL-based..).
Developed an evaluation pipeline with hallucination detection, relevance, and accuracy scoring (avg. accuracy 0.87).
Integrated LangSmith logging and Streamlit feedback for continuous performance improvement.

Keywords: RAG, SQL, Vector Search, LangChain, LangSmith, NLP, LLMs.
Generative AI intern SKILLIA June202–August2025
AI Strategic Assistant to automatically build targeted, differentiating, and closing-oriented SKILLIA offers | [Link](#)
Developed an Offer Generator using Flask, LangChain, and Cohere LLM.
Built an end-to-end AI pipeline with semantic document retrieval, proposal generation, and quality scoring.
Achieved 76% overall quality score (Precision 87%, Consistency 78%, Completeness 100%).
Integrated LangSmith tracing to monitor and improve pipeline performance.

Keywords: Generative AI, LangChain, Cohere, Flask, Semantic Retrieval, LLMs, LangSmith, AI Pipelines.

Data Science Intern BRI technology July2024–August2024
Data Engineering & Analytics Integration
Streamlined ETL pipelines using Talend Open Studio for efficient data migration and transformation..
Integrated Neo4j with PostgreSQL using Spring Boot and configured Google Analytics for real-time user tracking.

Keywords: Neo4j, PostgreSQL, Spring Boot, Talend, ETL, Google Analytics, Data Integration.

Projects

Viral Trend Analysis & AI Content Generation | [Link](#)
Developed a real-time AI system for trend detection on X & TikTok, improving trend identification speed by 60%.
Used ARIMA, LSTMs, and Prophet for trend forecasting, and RoBERTa for sentiment classification (accuracy:93%).
Automated content generation (text, image, video) using RAG & Stable Diffusion, reducing manual effort by 70%.
Deployed via Flask dashboard with interactive visualizations and real-time analytics
Keywords: ARIMA, LSTM, Prophet, RoBERTa, Azure AI, RAG, Stable Diffusion, Flask, Real-time Analytics.
AI-Powered Personal Recommendation App | [Link](#)
Built an AI-driven platform for personalized, eco-friendly tourism in Tunisia.
Used KNN with Cosine Similarity for tailored destination matching (Top-3 accuracy: 87%).
Leveraged Azure AI for sentiment analysis (F1-score: 91%) and integrated RAG, Gemini LLM for activity suggestions.
Enabled real-time weather forecasts, increasing planning efficiency by 25%.
Keywords: KNN, Cosine Similarity, Azure AI, Sentiment Analysis, RAG, Gemini LLM, Recommender Systems, Tourism AI.

Intelligent Recruitment System | [Link](#)
Built an ML-based CV screening engine that matches resumes with job offers, achieving 92% accuracy.
Created a smart chatbot using Mistral-7B to generate adaptive quiz questions based on job roles and candidate profiles.
Applied NLP techniques to rank and analyze candidate responses, improving shortlisting precision by 40%.
Keywords: Mistral-7B, NLP, CV Screening, Recruitment AI, Chatbots, Machine Learning, Candidate Profiling.

Image Reconstruction with Vision Transformers (ViT) | [Link](#)
Implemented masked image reconstruction using ViTs fine-tuned, achieving MSE of 0.013 compared to an autoencoder baseline (MSE: 0.008).
Enhanced image quality on corrupted datasets by 35% compared to CNN-based baselines.

Traffic Anomaly Detection | [Link](#)
Applied K-Means and DBSCAN on the CICIDS2017 to detect network anomalies, achieving 82% accuracy with K-Means and 79% with DBSCAN

Education

Data Science Engineering Student - Faculty of Science of Tunis September2021–Present
Baccalaureate in Mathematics - Honors: Very Good - Kairouan Pilot High School June2021

Certifications

Big Data & ML with Apache Spark – CDOSS
Natural Language Processing – LinkedIn
Deep Learning & Neural Networks – LinkedIn
Machine Learning Specialization – Coursera
AWS Academy Cloud Foundations – AWS

Languages

Arabic: Native
French: Fluent
English: Fluent
German: Basic

Volunteering

Optima Junior Enterprise
Marketing Consultant 2022
Business Development Team Member 2023