

Ayoub ETOULLALI

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DATA SCIENTIST & AI ENGINEER

LLMs | RAG | Automation | Data Scraping | Predictive Modeling | Cloud Deployment

Data Scientist and AI Engineer with 3+ years specializing in Large Language Models, agentic workflows, and scalable AI solutions. Expert in developing enterprise chatbots with RAG architecture, automating complex workflows, and extracting insights through advanced data scraping. Proven success deploying production-ready AI systems with Redis, PostgreSQL, and cloud-native architectures.

WORK EXPERIENCE

Freelance Data Scientist, Analyst, AI Engineer, Automation & Scraping (January 2023 - present)

- Architected enterprise chatbot with Agentic RAG architecture using Redis session management and PostgreSQL, implementing security controls and real-time Grafana monitoring
- Developed predictive models for e-commerce inventory forecasting and sports analytics using feature engineering (PCA/t-SNE) and rigorous ROI validation
- Engineered Python automation pipelines with Make.com and web scrapers capable of bypassing CAPTCHAs for sports stats extraction

Data Scientist, Analyst & AI Engineer | APEXIOM (October 2024 - July 2025)

- Deployed AI-powered chatbot using LLM integration (RAG) for restaurant/book reservations, automating customer service workflows
- Built lead generation pipeline using advanced web scraping techniques with Python (Selenium/Beautiful Soup)
- Implemented AI-driven meeting automation with ClickUp/Jira integrations for task generation

PROJECTS

- **AI Call Center Agent:** Built conversational AI using Rasa/Ollama Llama 3.2 with sentiment analysis, improving customer satisfaction insights
- **Function Calling with LLMs:** Developed Streamlit chatbot interface with Ollama integration for dynamic tool-calling workflows
- **TikTok Shop Reviews:** Scraped user comments with Playwright and performed sentiment analysis (NLTK VADER), visualizing trends via Streamlit

PROFESSIONAL SKILLS

- **AI Engineering:** LLMs (RAG, Agentic Workflows), Fine Tuning, Prompt Engineering, LangChain, Hugging Face
- **ML & Data Science:** TensorFlow/Keras, Scikit-learn, Time Series Forecasting, NLP (TF-IDF, Tokenization)
- **Automation & Scraping:** Make.com, Selenium, Playwright, Incogniton API
- **Cloud & Deployment:** Docker, Google Cloud, Cloudflare, FastAPI, PostgreSQL, Redis
- **Data Processing:** Pandas, NumPy, Spark MLlib, ETL Pipelines
- **Visualization:** Power BI, Grafana, Streamlit

AWARDS AND HONORS

- **MEGA Pan-African Hackathon:** Built an Athletic Performance Optimization System for the sports industry.
- **Kaggle Competitions:** Active participant with top-percentile rankings in ML challenges.
- **ENSIAS Problem-Solving Challenge:** Ranked 20th out of 130 teams.
- **Chess Club Tournament:** Achieved 3rd place, showcasing strategic and analytical thinking.

EDUCATION

ENSET Mohammedia – Morocco (Bac+5)

Engineering Degree in Computer Engineering – Big Data & Cloud Computing (2021–2024)

ALX Africa – Morocco

AiCE graduate – AI Career Essentials Program, Artificial Intelligence (2024)

ENS Tetouan – Morocco (Bac+2)

General University Studies Diploma – Mathematics Specialization (2019–2021)

CERTIFICATIONS

- ChatGPT Prompt Engineering for Developers (DeepLearning.AI)
- Prompt Engineering (Simplilearn)
- AI Career Essentials (ALX Africa)
- ChatGPT and Generative AI (365 Data Science)
- Web Scraping (Great Learning)
- Recommendation Systems (Great Learning)

INTERESTS

- **Design:** Creativity & Innovative Ideas
- **Mind Games:** Analytical & Strategic Thinking

LANGUAGES

Arabic: C2 French: B2 English: B2