MOHAMED AZIZ SAKISS

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SUMMARY

AI & Machine Learning Engineer specializing in Computer Vision, Generative AI, LLMs and Automations. Experienced in building production-ready pipelines, real-time inference models, and integrating Blockchain for data integrity. Proven track record in implementing state-of-the-art (SOTA) research—such as YOLOv11 and Transformers—to bridge the gap between high-accuracy AI and Cybersecurity. Passionate about deploying scalable, high-impact solutions for international startups and enterprise-level infrastructure.

EDUCATION

EPI International Multidisciplinary School — Sousse, Tunisia
Engineering Degree in Artificial Intelligence & Data Science — *Sep 2021 – Aug 2026 (Expected)*

TECHNICAL SKILLS

Generative AI & LLMs: LLMs, LanGraph, agents, RAG, Prompt Engineering, Embeddings, LangChain, Hallucination Analysis
Machine Learning: Transformers, CNNs, Scikit-Learn, XGBoost, Random Forest, TensorFlow/Keras, PyTorch
Computer Vision: YOLO (v8/v11), OpenCV, MediaPipe, ResNet, Image Classification, SAHI (Slicing Aided Hyper Inference), Object Detection
Data & Systems: Apache Spark (PySpark), Big Data Pipelines, Streamlit, Blockchain (Hashing/Ledgers), Notebook, Docker, Git, SQL
Programming: Python, C++, Bash

PROFESSIONAL EXPERIENCE

Software Development Intern — Remote, Switzerland
Business Scalable — *Jul 2025 – Aug 2025*

Developed Production-Ready AI Agents: Designed and deployed NLP-based chatbots using LLMs (Gemini/OpenAI) and LangChain, automating customer interactions and reducing response latency.

End-to-End Pipeline Engineering: Built scalable data pipelines for business applications, integrating REST APIs with backend systems to ensure real-time data processing.

Documentation/Deployment: Collaborated with the engineering team to document model performance metrics and streamline the deployment process using Docker and CI/CD principles.

PROJECTS

Secure Brain Tumor Classification (NeuroChain) | ***Python, TF, Blockchain*** — Nov 2025 – Jan 2026

Developed an end-to-end medical diagnostic application merging Deep Learning with a custom Blockchain backend to ensure immutable patient data logging.

Blockchain Integration: Engineered "NeuroChain," a Python-based ledger using SHA-256 cryptography. Implemented a strict verification protocol that flags unauthorized modifications with a "Tampering Detected" alert.

Interactive Dashboard: Built a full-stack Streamlit interface allowing doctors to upload MRI scans, view real-time classification results, and verify cryptographic integrity.

Model Performance: Trained a high-precision CNN model (TensorFlow/Keras) for tumor detection.

Full-Stack Generative AI Agent for E-Commerce | ***Python, Gemini, RAG*** — Nov 2025 – Dec 2025

Designed and deployed a tool-using Generative AI agent powered by Gemini Flash 2.5 to enable real-time inventory queries and order tracking.

Implemented RAG (Retrieval-Augmented Generation) to ground responses in structured ERP data, significantly reducing hallucinations and improving response accuracy.

Real-Time Object Detection for Autonomous Driving | ***YOLOv11, PyTorch*** — Oct 2025 – Dec 2025

Implemented and fine-tuned YOLOv11m on the BDD100K dataset (7,000+ images) for autonomous vehicle perception.

Conducted ablation studies to optimize mAP vs. inference latency for edge deployment and improved small-object recall using SAHI.

Real-Time Credit Card Fraud Detection System | ***PySpark, MLlib*** Nov 2025 – Dec 2025

Built an end-to-end Big Data pipeline processing 1M+ transactions using Apache Spark.

Solved extreme class imbalance using custom class weighting (5.7x penalty), achieving 98.8% recall and AUC $>$ 0.99 with a weighted GBT model.

CERTIFICATIONS

Machine Learning Specialization — DeepLearning.AI (Mar 2026)

Generative AI: Prompt Engineering Basics — IBM (Mar 2026)

Building RAG Agents with LLMs — NVIDIA (Nov 2025)

Fundamentals of Deep Learning — NVIDIA (Nov 2025)

Building Transformer-Based Natural Language Processing Applications — NVIDIA (Feb 2026)

Foundations of Data Science — Google (Jan 2026)

LANGUAGES

Arabic: Native | **English**: Professional | **French**: Professional | **German**: A2 (Basic)