



Riyadi Adnane

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Summary

AI Engineer with 2+ years of experience developing intelligent systems for industrial applications. Expert in natural language processing (LLMs, RAG) and scalable machine learning architectures. Successfully led intelligent automation projects generating over 31% in operational efficiency gains. Full mastery of the AI model lifecycle, from research to production.

Education

Master's in AI and Data Science, FST Tanger – Tangier, Morocco	2023 – 2025
Bachelor's in Computer Science, FST Tanger – Tangier, Morocco	2018 – 2022

Certifications

Data Science Certification, ALX Africa 	May 2024 – May 2025
AWS Cloud Practitioner, ALX Africa	June 2025 – July 2026

Experience

Synertic, AI & Data Science Engineer	Feb 2025 – Present
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- **AI-Powered Cybersecurity Agent (Multi-Task SOC Assistant):**
 - Developed a versatile AI agent to automate incident analysis, severity prediction (**92% accuracy**), and detailed reporting using **NLP** (LLMs) and hybrid models (**XGBoost**, **Random Forest**).
 - Designed a unified architecture integrating **XSOAR**, **The Hive**, and a hybrid data warehouse (**Inmon-Kimball**) on **Azure Fabric**, secured by **Key Vault**.
 - Built real-time ETL pipelines using **Apache Kafka** for log ingestion and preprocessing, reducing incident response time by **63%**.
- **Automation & Optimization:**
 - SOC assistant with NLP capabilities for real-time analysis and automated report generation (**PDF** via **LaTeX** and **Power BI**).
 - Continuous model optimization based on performance metrics (**F1-score**, **AUC-ROC**) and analyst feedback.

Datapilar, AI Engineer	Feb 2024 – Dec 2024
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- **RiyadiAI Chatbot Project:**
 - Led the development of a personalized fitness chatbot using **LLaMA 3.1 LLM** with **RAG** and **NLP**.
 - Designed a scalable architecture integrating **ChromaDB** and **MySQL** for efficient data management.
- **SMH Project:**
 - Led a cross-functional team to embed AI into a smart home automation system.
 - Developed the user interface in **Flutter** and backend in **FastAPI**.
 - Integrated a **GRU-CNN Hybrid** model improving operational efficiency by **23%**.

Emdad – Qatar, Full Stack Developer (Magento/Python/Vue.js)	April 2023 – Sept 2023
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- **B2B/B2C E-Commerce Platform:**
 - Developed and maintained a Magento solution with custom PHP extensions for managing complex catalogs (**10,000+ products**).
 - Created Python scripts (**Scrapy**, **BeautifulSoup**) for automated product data extraction and synchronization from third-party vendors.
 - Built a modern admin dashboard in **Vue.js** and deployed on **AWS** (EC2, RDS, S3).

Projects

Mobile Application for Cancer Detection (AI + Healthcare)

- **CNN Model Development:**
 - Trained a **Convolutional Neural Network (CNN)** on a five-class dataset for cancer detection, achieving high accuracy of 84%.
 - Preprocessed medical images (normalization, augmentation) to improve model robustness.
- **Mobile Deployment:**
 - Integrated the trained model into a cross-platform mobile app using **Flutter/React Native/TensorFlow Lite** for real-time predictions.
 - Optimized inference speed for low-latency user experience (<100ms per prediction).
- **Technical Rigor:**
 - Evaluated performance using metrics like **precision, recall, and F1-score** to address class imbalance.
 - Compared results with state-of-the-art benchmarks (ResNet, EfficientNet).

Autonomous Smart Wheelchair (AI + IoT)

- **Autonomous Navigation:**
 - Implemented **A* algorithm** for path optimization with real-time obstacle avoidance (**YOLOv5**, latency < 50ms).
 - Hardware integration with **Raspberry Pi** and LiDAR sensors.
- **Academic Contribution:**
 - Published a paper in *Researchgate* on enhancing A* for mobile robots.

Multimedia Mining & Indexing (2D/3D Retrieval & Classification)

- **3D System:**
 - Developed a 3D model search engine based on shape similarity using advanced descriptors (**Fourier Coefficients, Zernike Moments**).
 - Achieved **89%** accuracy on ShapeNet Core55 using a hybrid geometry + deep learning approach.
- **2D System:**
 - Built an image classification pipeline using **color histograms** and **texture analysis** (GLCM), with relevance feedback.
 - Reduced search time by **60%** using vector indexing (**FAISS**).

Academic Chatbot with NLP (LLaMA 3 + RAG)

- **Architecture:**
 - Fine-tuned **LLaMA 3** with **LoRA** for contextual responses (+67% accuracy vs. baseline).
 - Vectorized knowledge base using **ChromaDB** enhanced with **RAG**.
- **Deployment:**
 - Unified interface (Vue.js) + containerized Flask API (Docker), supporting **100+ concurrent requests**.

Expertise

Artificial Intelligence & Machine Learning	PyTorch, TensorFlow, LLMs (LLaMA, GPT-4), RAG, Fine-tuning, NLP	Computer Vision, Scikit-Learn, Hugging Face, XGBoost, ONNX
Data Science & Engineering	Python, SQL, Spark, Pandas, NumPy	Data Warehousing, Matplotlib, Seaborn, Power BI, Big Data Pipelines
Software Engineering & Deployment	FastAPI, Flask, Docker, Kubernetes, CI/CD	JavaScript/TypeScript, AWS, Azure, Git, Microservices, RESTful APIs

Languages

French: Advanced

English: Advanced

Arabic: Native