

# SAMAH FUJO

Applied Scientist | AI Team Lead | AI/ML Engineer

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English, Arabic



## Professional Summary

Results-driven Applied Scientist, AI Team Lead, and Full-Stack AI Engineer with strong experience designing, building, and deploying production-grade AI solutions across government, energy, real estate, research, and enterprise domains. Combines research depth with hands-on delivery across NLP, generative AI, LLMs, RAG, OCR, document intelligence, deep learning, and scalable web platforms using Django, FastAPI, Next.js, and modern MLOps practices. Experienced in leading cross-functional teams, turning business requirements into AI use cases and proofs of concept, presenting technical outcomes to executive stakeholders, and driving independent innovation through self-initiated AI products and research-backed experimentation.

## Core Skills

<b>AI / ML</b>	Machine Learning, Deep Learning, NLP, Generative AI, LLMs, Prompt Engineering, RAG, OCR, Document Intelligence, Computer Vision foundations
<b>Models &amp; Tools</b>	Transformers (Hugging Face), BERT, RoBERTa, T5, Gemini, Ollama, LangChain, Langfuse, OpenWebUI, Streamlit
<b>Backend / Frontend</b>	Python, Django, Django REST Framework, FastAPI, Flask, React, Next.js, JavaScript, TypeScript, Tailwind CSS, REST APIs, Swagger/OpenAPI
<b>Data / Infra</b>	PostgreSQL, MongoDB, MySQL, Oracle, SQL Server, Docker, NGINX, Gunicorn, Postman, RBAC, JWT

## Professional Experience

### AI / Data Scientist Team Lead

Nasser Artificial Intelligence Research & Development Centre (NAIRDC), Department of Nasser Centre for Science and Technology | Bahrain | Jan 2022 - Aug 2025

- Led cross-functional teams in the design, development, and deployment of scalable AI/ML solutions aligned with business and research objectives.
- Directed end-to-end project delivery from ideation and stakeholder requirement gathering through model development, validation, deployment, and monitoring.

- Guided best practices for model quality, maintainability, testing, documentation, and technical governance across AI initiatives.
- Presented technical findings, AI concepts, and delivery progress to business and executive stakeholders in clear, decision-oriented language.
- Mentored junior team members, conducted code reviews, and optimized team processes to improve quality and productivity.

## Senior AI Data Scientist

Nasser Artificial Intelligence Research & Development Centre (NAIRDC), Department of Nasser Centre for Science and Technology | Bahrain | Jan 2021 - Dec 2022

- Developed and deployed machine learning and deep learning models for predictive analytics, automation, and business insight generation.
- Designed data pipelines and feature engineering workflows for large and complex datasets.
- Collaborated with cross-functional teams on AI strategy, experimentation, model optimization, and technical reporting.
- Authored research papers and technical reports related to AI methods, findings, and solution outcomes.

## Part-Time Lecturer - Computer Skills

Applied Science University (ASU) | Bahrain | Jan 2021 - May 2025

- Delivered interactive bilingual instruction in Arabic and English covering digital literacy, Microsoft Office, database fundamentals, and programming basics.
- Developed course material and hands-on labs, while integrating AI and automation concepts to keep instruction aligned with modern industry trends.

## Integration Engine Specialist

Mohammed Bin Khalifa Cardiac Centre | Bahrain | Jan 2021 - Dec 2021

- Led integration activities for CVIS and CPACS systems, including user support, troubleshooting, and operational coordination between clinical and IT teams.

## Research Assistant

Applied Science University | Bahrain | Jan 2020 - Dec 2021

- Developed an internal Research Management System using Oracle APEX and SQL to streamline research tracking and reporting.

## Selected Ai Projects & Independent Initiatives

### 1. LLM-Powered Portfolio & Professional Knowledge Chatbot - 2026

- Designed and iteratively improved, a portfolio chatbot that answers grounded questions about experience, skills, projects, certifications, and professional background using document ingestion, semantic retrieval, reranking, and citation-aware responses.
- Worked on hybrid routing strategies across cloud and local models, including Gemini and Ollama-based fallbacks, to improve reliability, cost control, and response quality.

### 2. RAG & Lang Chain HR Policy Assessment - 2026

- Completed a self-initiated assessment prototype using RAG and Lang Chain for HR policy documents, including document ingestion, chunking, embeddings, retrieval-based question answering, citation grounding, and prompt-injection-aware response handling.
- Designed the solution to reflect enterprise AI delivery expectations, with attention to reproducibility, evaluation, and practical tool-use patterns aligned with AI solutions delivery and applied scientist responsibilities.

### 3. AI Property Search Chatbot - 2025

- Built a conversational property assistant using Django and Next.js that extracts structured filters from natural language, asks dynamic follow-up questions, and returns ranked property matches.
- Implemented advanced filter extraction, normalization, scoring, and interactive response flows using LLM-assisted understanding and backend search logic.

### 4. Spend Analysis & UNSPSC Classification Platform - 2025

- Developed procurement intelligence workflows using BERT/Roberta-style classification, data enrichment, description enhancement, and dashboard reporting for purchase-order categorization and spend visibility.
- Worked on model experimentation, training pipelines, confidence handling, and human-in-the-loop review strategies for enterprise procurement data.

### 5. Document AI, OCR & Workflow Automation Initiatives - 2025

- Built self-initiated and professional prototypes that combine OCR, PDF parsing, LLMs, and backend APIs to extract structured information from scanned or semi-structured documents and support downstream decision workflows.
- Explored agentic AI, rule-based plus ML decisioning, and multimodal orchestration patterns for citizen-service and enterprise automation use cases.

## Education

- **Master's in information technology & computer science**  
Ahlia University, Bahrain | 2021 | GPA: 4.0 / 4.0
- **B.Sc. in Computer Science**  
Applied Science University, Bahrain | 2019 | GPA: 4.0 / 4.0

## Research, Publications & Professional Activities

- Published research author/co-author with a portfolio of peer-reviewed work in AI, computer science, and related applied technology topics.
- Delivered AI workshops, hands-on training, and internal knowledge sessions covering machine learning, computer vision, prompt engineering, responsible AI, and AI governance.
- Comfortable bridging research, technical implementation, and stakeholder-facing AI solution design.

## Additional Information

- Residency: UAE Golden Visa holder
- Open to Applied Scientist, AI Engineer, AI Solutions, and Full-Stack Developer (Python, Django, and Next.js).