

Ahmed Othman AI Engineer

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Profile

Specialized LLM Engineer with expertise in building autonomous AI agent systems and multi-agent frameworks. Proven experience in developing self-evolving knowledge graphs, RAG systems, and intelligent chatbots using cutting-edge LLM technologies. Skilled in agent orchestration, tool-calling mechanisms, and building production-ready AI systems with Python, TensorFlow, and PyTorch.

Education

B.Sc. in Computer Science & Artificial intelligence 2021 – 2025
Nile University
Grade :Very Good

Graduation Project


MAYOM - Self-Evolving Knowledge Graph Framework for Enhanced RAG Systems 05/2025

- **Led development of autonomous AI agent framework** enabling LLMs to independently construct and enrich knowledge graphs, implementing multi-agent orchestration with specialized roles for knowledge extraction, validation, and graph construction, while building agent-to-agent communication protocols for collaborative knowledge building.
- **Technologies:** Llama3, Neo4j, Ollama, Light Graph, Graph RAG, React, LangChain.


Projects

Therapeutic Chatbot with Neo4j Knowledge Graph 04/2025

- **Developed conversational AI agent** with 107,000-relation knowledge graph for mental health diagnosis, implementing multi-turn dialogue management and context-aware response generation that outperformed Bio_ClinicalBERT and Llama-3_70B across single-turn and multi-turn test scenarios, while building agent memory systems for patient interaction history and personalized responses.
- **Technologies:** Neo4j, Llama-3_70B, TogetherAI, Gemini, Agent Memory Systems

OCR Processing Agent with Custom Pipeline  03/2025

- **Built document processing agent** with intelligent preprocessing and text extraction capabilities, implementing multi-stage agent workflow for document analysis and quality assessment, deployed via cloud-based agent architecture on Streamlit Cloud for scalable document processing.
- **Technologies:** Python, OpenCV, Tesseract, Streamlit, Docker, Agent Pipelines

Computer Vision Interactive Game & Model Benchmarking Platform  02/2025

- **Developed multi-modal AI agent** integrating pose detection, facial expression recognition, and object tracking with intelligent agent decision-making for real-time computer vision task routing, implementing model comparison agents (MediaPipe/MoveNet, YOLOv8/SSD) with automated performance benchmarking capabilities.
- **Technologies:** OpenCV, TensorFlow, MediaPipe, YOLOv8, Agent Orchestration

Soccer Jersey Generation using Adversarial Neural Networks

- Focused on generating unique and innovative soccer jersey designs
- **Models:** Generative Adversarial Networks(GANs)
- **Tools:** TensorFlow/Keras - StyleGAN - Beautiful Soup - Selenium - Image Augmentation - Flask - JS

Professional Experience & Internships

AI Instructor, Inno Code <ul style="list-style-type: none">Lead comprehensive AI diploma program covering Python fundamentals through deep learning, NLP, and computer vision applications	03/2025 – present Part Time
Junior Teaching Assistant, Nile University <p>Teaching the "Data Science" reviewing lab tasks with students, and grading their assignments.</p>	10/2024 – 02/2025 Part Time
AI Engineer, National Telecommunication Institute <ul style="list-style-type: none">Collaborated on Arabic NLP tasks, including WS , LLM development for language applications.	08/2024 – 10/2024 Training (80 hours)
NLP Engineer, Smsm <ul style="list-style-type: none">Built web scraping agents with intelligent content extraction and processing capabilities, while developing Arabic language processing agents for automated content generation and multilingual text analysis workflows.	03/2024 – 05/2024 Internship
Machine Learning Engineer, Technocolabs Softwares <ul style="list-style-type: none">Led a team in data collection, data analysis, modeling, and deployment.Completed two real-life projects: Big Mart Sales Prediction , Hit Songs Predictor Web-App	07/2023 – 09/2023 internship




Freelance Projects

Freelance Web Developer <p>Art Gallery Project</p> <ul style="list-style-type: none">Developed a React-based digital gallery platform with integrated AI chatbot, enhancing user engagement and navigation efficiencyImplemented secure database architecture using Supabase and Firebase for seamless artwork management and user interactionsDelivered a complete solution with optimized performance metrics, meeting all client specifications on schedule	02/2025
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Skills

Python, C++, Java.	Frameworks/Libraries
Tools <p>Git, Docker, AWS, MLflow</p>	TensorFlow, PyTorch, Hugging Face Transformers, OpenCV, YOLO, RNNs & LSTMs, LangChain, LangGraph, AutoGen, CrewAI.

Certificates

Machine Learning Specialization 		Deep Learning Specialization 		Natural Language Processing Specialization 
Large Language Model Operations (LLMOps) Specialization 