

# Yousef Alsayed Abdelfattah

## AI Engineer | AI Solutions, LLMs & Multi-Agent Systems

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### PROFILE

AI engineer with a mechatronics background, focused on AI solution development, AI-assisted coding, LLM applications, agents, retrieval and workflow automation. Currently at Arche Robotics and iSchool. Seeking a full-time AI Engineer or AI Automation role; military service completed.

### TECHNICAL SKILLS

**Agents & automation:** AI-assisted development, Claude Code, OpenAI Agents SDK, CrewAI, LangGraph, n8n, MCP and FastMCP

**Retrieval & models:** LangChain, ChromaDB, RAG, PyTorch, Qwen/QLoRA fine-tuning experiments, LLM evaluation and RLHF

**Backend & cloud:** Python, FastAPI, Pydantic, Docker, AWS Lambda/SAM, DynamoDB Streams, S3, API Gateway and CloudFront

**Quality & interfaces:** Pytest, Git, Langfuse, prompt engineering, Next.js, React and Streamlit

**Engineering foundation:** Embedded C, ROS/ROS 2, control systems, Siemens TIA Portal and CNC fundamentals

### PROFESSIONAL EXPERIENCE

**Arche Robotics** July 2026 - Present

#### Artificial Intelligence Intern

- Re-architected Python, AWS Lambda and AWS SAM fleet monitoring from 30-minute polling to DynamoDB Stream triggers, with approximately 0.3-second log capture.
- Built FastMCP emulation, an inference skip ladder and telemetry recovery watchdogs. Shipped fixes for nine production issues, validated with 265 Pytest unit tests and 13 live-stream smoke tests.

**iSchool** May 2026 - Present

#### English-Speaking Programming Instructor

- Teach over 30 students across Grades 1–12 in English. Develop project-based Python, AI, JavaScript and UI/UX curricula that build programming and problem-solving skills.

**Egyptian Armed Forces Engineering Authority** January 2025 - March 2026

#### IT Help Desk (Military Service)

- Completed national military service while providing on-site IT infrastructure, hardware and technical troubleshooting support.

**Outlier** November 2024 - January 2025

#### AI Software Engineer

- Evaluated over 50 LLM responses daily across more than six domains and contributed RLHF feedback. Developed more than 20 prompt variants to investigate hallucination and reasoning issues.
- Reviewed over 50 analyst submissions and provided feedback to improve annotation consistency.

## SELECTED AI PROJECTS

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### Advanced Engineering Team

A CrewAI multi-agent software engineering team that designs, builds, tests, and presents generated software.

Python · CrewAI · Groq · Gradio · Docker · LangFuse

### SDR Multi-Agent

An end-to-end sales development pipeline that researches prospects, drafts personalized emails, selects the best version, and sends it.

Python · OpenAI Agents SDK · Groq · Tavily · SendGrid · Langfuse

### RAG-AI-Agent

A Streamlit application for building document-grounded experts from PDFs with ChromaDB, citations, and optional tools.

Python · Streamlit · LangChain · ChromaDB · Groq · Hugging Face · Tavily

### EgyptianSavoryScout

An AI-powered Egyptian restaurant recommender that ranks more than 1,000 locations by query relevance, city, and ratings.

Python · FastAPI · React · TF-IDF · ChromaDB · Hugging Face

## SELECTED CERTIFICATIONS

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AI Coder — Complete Claude Code & Coding Agents Course

Udemy / Ed Donner / Ligency · 21 Oct 2026

AI Builder — Create Agents, Voice Agents & Automations in n8n

Udemy / Ed Donner / Ligency · 14 Oct 2026

AI Engineer Production Track — Deploy LLMs & Agents at Scale

Udemy / Ed Donner / Ligency · 03 Oct 2026

AI Engineer Agentic Track — The Complete Agent & MCP Course

Udemy / Ed Donner / Ligency · 15 Jun 2026

AI Engineer Core Track — LLM Engineering, RAG, QLoRA, Agents

Udemy / Ed Donner / Ligency · 06 May 2026

AI Leader — Generative AI & Agentic AI for Leaders & Founders

Udemy / Ed Donner / Ligency · 09 Oct 2026

Machine Learning Specialization

Stanford Online / DeepLearning.AI / Coursera · 24 Aug 2026

Docker Foundations Professional Certificate

LinkedIn Learning · 06 Sep 2026

CS50's Introduction to Artificial Intelligence with Python

Harvard / edX · Completed

EF SET English Certificate

EF SET · 27 Jul 2024 · 71/100, CEFR C2 Proficient

## EDUCATION

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### Misr University for Science and Technology (MUST)

Bachelor of Science in Mechatronics, Robotics, and Automation Engineering

September 2019 - June 2024

**Graduation project:** R2-WAITER — Autonomous Service Robot. Autonomous waiter robot for restaurants — B.Sc. Final Year Project in Mechatronics Engineering at MUST, Spring 2024. ROS1, LIDAR, Intel RealSense D435i, SLAM and sensor fusion on NVIDIA Jetson Nano. 3rd place at the International Gathering of Artificial Intelligence in Egypt.