Mohamed Sameh

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EXPERIENCE

Nylix AI | AI Solutions Architect | Remote | Oct 2026 – Present

- Design and deliver AI agents, chatbots, and custom AI systems for businesses, along with the websites and web applications around them.
- Built Nylix Inbox, an omnichannel customer inbox with an AI add-on that answers conversations, plus a multi-tenant platform for operating white-label customer-service AI agents across WhatsApp, Telegram, Discord, and the web.
- Delivered client-facing AI products end to end: agent logic, RAG, dashboards, usage metering, and deployment.

Acksession | AI Engineer (Part-time) | Remote | Oct 2026 – Present

- Working on the machine learning side of a predictive platform for datacenters.
- Continuing to support the EasyEsuite ERP AI features, including the ERP agent.

Acksession | AI Engineer (Full-time) | Remote | Nov 2025 – Sep 2026

- Worked on AI features for EasyEsuite, a multi-tenant ERP system for e-commerce buying groups, including an ERP agent that can inspect pages, navigate the app, generate reports, and execute ERP actions.
- Designed agent workflows that connect LLM reasoning to ERP data, page context, and business actions across inventory, purchasing, invoicing, fulfillment, accounting, and tenant-specific context.
- Built deep agents using LangChain's Deep Agents SDK.
- Worked on developing an MCP server.
- Built External Sources, a multi-analyzer market intelligence pipeline for news, events, and product trends, tailored to each tenant's business.

Cognitronix AI | AI Engineer | Cairo, Egypt | Dec 2023 – Jun 2025

- Developed AI models for 3D medical volumes and 2D dental healthcare images.
- Worked on dental AI workflows involving CBCT volumes, image preprocessing, segmentation, and model evaluation for clinical planning use cases.
- Optimized models with ONNX and deployed containerized services via Docker on Google Cloud Platform.
- Applied CNN, U-Net, ResNet, and Transformer architectures; tracked experiments with W&B.
- Collaborated across engineering and product requirements to translate dental healthcare needs into model pipelines and deployable AI services.

PROJECTS

Nylix Inbox | Visit Website

- Built an omnichannel inbox that brings customer conversations from multiple channels into one place for teams to manage, with an AI add-on that answers incoming conversations automatically.
- Built an agent factory for customer-service AI: provision, configure, and operate a white-label assistant per client from one control panel, on WhatsApp, Telegram, Discord, or the client's website.
- Designed a vertical-agnostic agent engine where behavior is data — system prompt, tools, features, and model settings live per agent — so onboarding a new kind of business writes configuration, not code.
- Shipped an admin dashboard plus a limited client portal (pause/resume, standing instructions, live conversation takeover, usage vs plan), with the boundary enforced by allow-list serializers.
- Implemented multi-provider LLM support (Anthropic, OpenAI, Gemini), RAG over Postgres + pgvector, plans, quotas, per-message cost metering, and 1,350+ automated tests using FastAPI, React, and PostgreSQL.

AI Features for EasyEsuite | Visit Website

- Built an ERP agent for EasyEsuite that can view tenant ERP data, navigate pages, generate operational reports, and execute actions across inventory, purchasing, invoicing, fulfillment, and accounting workflows.
- Connected the agent to live ERP context, page tools, reporting workflows, and structured action execution so operators can move from question to analysis or action in one flow.
- Implemented production AI patterns including provider routing, observability, structured agent actions, and tenant-aware prompts.

DentaVinxi - Dental AI Suite | Visit Website

- Dental AI suite for smile design and implant planning, supporting dentists with AI tools for treatment planning and patient communication.
- Cloud-enabled implant planning workflow using 3D CBCTs to support dental implant assessment.
- AI smile design capability using Stable Diffusion to enhance treatment outcomes and patient acceptance.
- Combines medical imaging AI and generative AI workflows for dental planning, visualization, and clinical decision support.

EDUCATION

B.Sc. Systems and Biomedical Engineering | Cairo University, Faculty of Engineering | 2023 | Egypt
GPA: 3.1 / 4.0
Graduation Project: Trained AI models to analyze BCG (ballistocardiogram) signals and detect irregularities, including signal processing, feature extraction, and model evaluation.

TECHNICAL SKILLS

Programming: Python, C/C++, JavaScript, Java, MATLAB
AI / ML: PyTorch, TensorFlow, Keras, OpenCV, MONAI, scikit-learn, Hugging Face, CNNs, U-Net, ResNet, Transformers
LLM / Agents: Pydantic AI, LangChain, LangGraph, LangChain Deep Agents SDK, FastMCP, MCP, CrewAI, multi-provider LLM routing
Backend / Web: FastAPI, Flask, Django, React, Streamlit
Cloud / DevOps: Docker, CI/CD, GitHub Actions, AWS, GCP, Cloudflare, Vercel, Railway
Data / Auth / Observability: PostgreSQL, Supabase, Firestore, W&B, MLflow, Logfire, PromptLayer, Git

CERTIFICATIONS

Deep Learning Specialization (Coursera), **Generative AI with LangChain** (Udemy), **MLOps Bootcamp** (Udemy), **Biomedical Imaging** (edX), **HIPAA Security Compliant** (HIPAA Training), **Claude: Introduction to Agent Skills**, **Claude: Introduction to Model Context Protocol**, **Claude Code in Action**, **Claude with the Anthropic API**

RELEVANT COURSEWORK

Calculus, Linear Algebra, Probability and Statistics, Data Structures, Algorithm Analysis, Software Engineering, Machine Learning, Deep Learning, NLP, Image Processing, DSP