

HOSSAM HASSAN

Applied AI & Automation Engineer

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PROFESSIONAL SUMMARY

Applied AI and automation engineer who builds production systems across LLM agents, RAG, workflow orchestration, backend APIs, data, and customer operations. Combines graduate AI training with a seven-year foundation in finance and accounting, translating business processes into reliable software with explicit state, monitoring, security, and recovery. Delivers in Arabic and English for teams across MENA and Europe.

TECHNICAL SKILLS

Applied AI: LLM agents, RAG, tool calling, prompt architecture, model routing, safety gates, computer vision, NLP

Automation: n8n, event-driven workflows, webhooks, Microsoft Graph, Chatwoot, Telegram, document generation

Backend & Data: Python, FastAPI, PostgreSQL, Supabase, pgvector, Redis, SQL, REST APIs

Product & Frontend: Next.js, React, TypeScript, Arabic RTL, operator workflows, API integration

Production: Docker, Linux, Nginx, PM2, Cloudflare, monitoring, incident diagnosis, backups, CI/CD

EXPERIENCE

Independent AI & Automation Engineer | Remote | 2025 - Present

- Built and hardened production AI and automation systems for customer support, email operations, project tracking, quote generation, reporting, and internal control.
- Integrated n8n, Supabase/PostgreSQL, Chatwoot, Microsoft Graph, Telegram, LLM providers, and document-rendering services through clear workflow boundaries.
- Delivered five completed Mostaqi engagements with 100% completion and on-time delivery as of July 2026; client feedback consistently cites professionalism, understanding, speed, and quality.
- Produced bilingual operating guides, architecture maps, deployment runbooks, and client handoff documents.

Sales Team Leader | Real-Estate Sector | Cairo, Egypt | 2019 - 2021

- Led a six-person sales team and used KPI tracking, forecasting, and pipeline analysis to guide execution.
- Built practical reporting models for conversion, pipeline health, and performance reviews.

Accountant & Software Developer | Trading and Travel Operations | Cairo, Egypt | 2011 - 2020

- Automated financial reporting, data cleaning, validation, and cross-department workflows using Python, SQL, Excel, and internal software.
- Built accounting applications and API integrations that connected business requirements with reliable data processes.

SELECTED PROJECTS

Bilingual Clinical AI Triage Platform | Team Project

- Contributed to an Arabic/English, RAG-grounded clinical assistant with safety gates, structured doctor handoff, patient/doctor/admin workflows, and multi-provider AI integration.
- Hardened runtime configuration, model routing, authentication persistence, backend/API/frontend schema alignment, and bilingual demo/deployment documentation.
- Stack: FastAPI, Next.js, PostgreSQL, pgvector, Redis, Docker, Groq, Gemini, OpenAI.

Multilingual Customer Operations Automation | Anonymous Client

- Built and hardened intent routing, approved-knowledge responses, quote state, PDF generation/delivery, operational alerts, and multilingual support workflows.
- Moved success claims from free-form LLM output to verified workflow events and structured the customer/quote source of truth.
- Stack: n8n, Chatwoot, Supabase, PostgreSQL, Gemini, Gotenberg, Telegram, JavaScript.

AI Email and Project Operations Assistant | Anonymous Client

- Designed a client-owned Microsoft OAuth system for email ingestion, AI prioritization and summaries, progress extraction, controlled reply drafts, reports, monitoring, and backups.
- Separated ingestion, processing, reporting, operator control, alerts, and backup responsibilities across focused workflows.
- Stack: Microsoft Graph, Outlook OAuth, n8n, Supabase, PostgreSQL, Telegram, LLMs, PDF/Word/Excel.

EDUCATION

M.Sc. in Artificial Intelligence - Thesis Phase | Cairo University | 2023 - Present

Graduate Diploma in Computer Sciences - Very Good | Cairo University | 2021 - 2023

Bachelor of Commerce, Accounting | Ain Shams University | 2012

SELECTED CREDENTIALS

DeepLearning.AI & Stanford: Deep Learning, Machine Learning, GANs, Mathematics for ML

Google: Cybersecurity Professional Certificate, Data Analytics

Meta: Front-End Development, Back-End Development, Python Programming

IBM: Data Science Methodology, Tools for Data Science, Python for Data Science and AI

LANGUAGES

Arabic: Native | English: Professional working proficiency