George Youhana Heazil

AI Engineer | LLM Systems, RAG, AI Agents

Cairo, Egypt | georgeyouhana2@gmail.com | +20 122 335 0814 | GitHub | LinkedIn | Portfolio

Professional Summary

AI Engineer building production LLM, RAG, agentic, and computer-vision systems end to end, from requirements to deployment on cloud and on-premises infrastructure. Built and maintain ATR GPT, an enterprise RAG assistant used by 900+ employees across 20+ departments at EVA Group, and a Text-to-SQL platform that replaced manual reporting. Focused on bilingual Arabic–English applications, evaluation, and production reliability.

Professional Experience

AI Engineer **May 2025 – Present**

Akhnaton Trading and Distribution – EVA Group Limited

- **ATR GPT – Enterprise AI Assistant:** Designed and shipped a FastAPI RAG assistant on PostgreSQL and pgvector, used by 900+ employees across 20+ departments (**5,000+ queries per month**), taking it from requirements through production. Worked with department heads on rollout, and built OpenAI/Claude routing, agent-generated PowerPoint and Word deliverables, and guardrails with token/cost monitoring.
- **Enterprise Data Querying:** Built a Text-to-SQL service over 10+ Oracle Autonomous Database tables, working with the ERP/BI team from scoping to launch, that answers questions in about 10 seconds instead of **1–2 day manual report requests**. Set up an evaluation set of **100+** business questions reaching **~90%** correct SQL, then extended it into Sheet Chat, a LangGraph agentic pipeline for DuckDB querying, visualization, semantic search, and data-quality checks.
- **Demand Forecasting:** Shipped production forecasting pipelines (Ridge regression, LightGBM) per brand, customer, and channel, with per-SKU model selection by wMAPE, reducing wMAPE by **~15%** versus the previous baseline.
- **Call Quality Analytics:** Built a pipeline that pulls customer-service recordings from the CRM, transcribes them with Whisper, and scores customer and pharmacist interactions with LLM-based sentiment analysis, covering **1,500+ calls per month** for quality assurance.
- **Vision and Meeting Intelligence:** Deployed on-premises camera analytics (fire/violence detection, license-plate recognition, driver ID, attendance, people counting) across **20+ cameras at 3 sites**, and built a cross-platform desktop app that captures Zoom/Teams meetings, transcribes them in real time with Deepgram, and generates bilingual Arabic–English minutes with OpenAI.

Freelance AI Developer – *Upwork and Direct Clients* **Jan 2024 – Apr 2025**

- Delivered **10+** end-to-end machine-learning, computer-vision, and NLP projects for university clients, from data preparation and model training to evaluation and deployment as FastAPI or Streamlit apps with full documentation.
- Maintained a **100% Job Success Score** on Upwork; scoped requirements directly with clients and managed up to **3** concurrent projects to fixed deadlines alongside full-time study and teaching.

AI and Data Science Instructor – *Digital Egypt Pioneers, Elharefa, iSchool* **Oct 2024 – Feb 2025**

- Mentored two eight-week cohorts of up to 25 students in AI, Data Science, and freelancing; designed project-based coding curricula for school learners.

Machine Learning Engineer (Contract) – *GuruHub* **Apr 2024 – Jul 2024**

- Designed AI learning roadmaps and prototyped machine-learning features for an education platform.

AI Developer Intern – *Elegant Textile Engineering (A&M Programming)* **Jul 2023 – Aug 2023**

- Developed and evaluated machine-learning models for textile-production optimization and contributed to deployment within a four-member agile team.

Technical Skills

- **Core and Backend:** Python, SQL, FastAPI, Pydantic, REST APIs, Git, Linux
- **LLM and Retrieval:** RAG, LangChain, LangGraph, AI Agents, OpenAI API, Anthropic Claude API, OCI Generative AI, Ollama, pgvector, ChromaDB, BM25
- **LLMOps:** Fine-Tuning (LoRA/PEFT), Prompt Engineering, RAG Evaluation, Guardrails, Token/Cost Tracking
- **Machine Learning, Vision, and Speech:** Scikit-learn, TensorFlow, Keras, LightGBM, Hugging Face Transformers, OpenCV, YOLO, Google Cloud Vision, Whisper, Deepgram
- **Data and BI:** PostgreSQL, Oracle Autonomous Database, DuckDB, MySQL, MongoDB, Power BI
- **Cloud and DevOps:** Microsoft Azure, Oracle Cloud Infrastructure, Docker, CI/CD, GitHub Actions

Education

Master's Degree in Data Science **2026 – Expected 2028**

Arab Academy for Science, Technology, and Maritime Transport, Smart Village, Egypt

Bachelor's Degree in Artificial Intelligence, Data Science Department **Feb 2021 – Feb 2025**

Arab Academy for Science, Technology, and Maritime Transport, Alexandria, Egypt