

HAZEM WALEED KHALED

Junior AI Engineer

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SUMMARY

AI Engineer graduate from Cairo University with a strong foundation in Natural Language Processing (NLP), Large Language Models (LLMs), Deep Learning, and Data Analytics. Experienced in developing AI-driven solutions and seeking to leverage strong technical skills in a challenging AI/Data Science role.

EDUCATION

Faculty of Computers & Artificial Intelligence, Cairo University

2021 – 2025

Major: Artificial Intelligence — GPA: 3.77

Academic Achievement: Ranked 5th among graduating students

EXPERIENCE

AI/ML Engineering Internship

Jul 2025 – Sep 2025

4SALE International co. (Zamalek, Egypt — Hybrid)

- Designed and implemented machine learning systems for user analytics and engagement tracking.
- Conducted data exploration, cleaning, and feature extraction from warehouse data for predictive scoring.
- Collaborated with DevOps to integrate AI services into production systems.
- Ensured code reliability and scalability using documentation, version control, and performance testing.

AI Engineering Internship

Jul 2024 – Sep 2024

Fluid AI Medical (Ontario, Canada — Remote)

- Developed a chatbot generating patient summaries from unstructured medical reports (pre, post-op & labs).
- Prototyped an AI assistant for surgeons using NLP-based search and retrieval from surgical textbooks.
- Built 3D models for the Stream-Care Platform and co-developed the Stream Package Builder web application.

Teaching Assistant

May 2022 – Sep 2022

MEC Academy (Giza, Egypt — Hybrid)

- Mentored 50+ students with software engineering fundamentals and conducted weekly review sessions.

TECHNICAL PROJECTS

Medical SOAP Note Generation with Fine-Tuned LLMs

- Built dual-model system (Qwen-1.5B, DeepSeek-R1) for automated medical documentation.
- Developed data pipeline using OMI-Health dialogues with Pydantic schema validation.
- Applied LoRA fine-tuning with LLaMA-Factory (95% JSON validity, 89% clinical accuracy).
- Optimized single T4 GPU training, reducing inference cost to \$0.0011/sample at 23.2 tokens/sec.

User Scoring System

- Designed system architecture from data exploration to deployment.
- Cleaned and analyzed warehouse data to extract user behavior features.
- Built production-ready code and FastAPI service integrated with AWS DynamoDB for real-time scoring.
- Created Streamlit dashboard and React demo, leading to production rollout.

AI Voice Assistant for Breast Cancer Guidance

- Developed full-stack voice assistant using Next.js, Groq API, Whisper STT, LLM, and TTS pipeline.
- Implemented RAG with sentence-transformers and custom in-memory vector store for cross-lingual retrieval.
- Designed responsive React UI with dynamic markdown rendering and real-time audio playback.

SKILLS

Programming Languages: Python (Proficient), JavaScript, TypeScript, C++, Java

AI & Machine Learning: NLP, Classical Machine Learning, Deep Learning, Feature Engineering, Prompt Engineering, Large Language Models (LLMs), Fine-Tuning (LoRA)

ML Tools & Frameworks: PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, Matplotlib

LLM, RAG & Agentic AI Ecosystem: LangChain, ChromaDB, FAISS, CrewAI, Hugging Face Transformers, APIs (OpenAI, Anthropic, Gemini), Hugging Face, ElevenLabs

Data Analytics: SQL, Data Cleaning, Statistical Analysis, Data Visualization

Software Engineering: FastAPI, Docker (containerization), Git (version control)

Soft Skills: Problem Solving, Collaboration, Communication, Adaptability, Attention to Detail, Leadership, Time Management, Technical Documentation

CERTIFICATES & LANGUAGES

Certificates: NLP Specialization (deeplearning.ai), Deep Learning Specialization (deeplearning.ai), Machine Learning Specialization (Coursera)

Languages: Arabic (Native), English (Fluent)