ISLAM M. A. OWDA

AI / ML Engineer | LLM & RAG Systems | MLOps
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PROFESSIONAL SUMMARY

AI/ML engineer with hands-on experience building and shipping a complete Retrieval-Augmented Generation (RAG) application end to end: retrieval, generation, automated evaluation, monitoring, and containerized deployment. Comfortable across the modern AI engineering stack — LLM APIs, vector/text search, MLOps tooling (MLflow, orchestration design with Kestra), observability (Grafana, PostgreSQL), and Docker-based deployment. Also brings Agile product leadership experience as Product Owner on a computer-vision application, open-source contribution, and a track record of teaching technical concepts to peers. Fluent in professional written and spoken English (Duolingo English Test: 125, B2 Upper-Intermediate).

TECHNICAL SKILLS

- Programming Languages: Python (Core), JavaScript (ES6+), Java (OOP)
- AI / LLM Engineering: Retrieval-Augmented Generation (RAG), Prompt Engineering, LLM-as-a-Judge Evaluation, OpenAI API, minsearch, Scikit-learn, TensorFlow, Keras, OpenCV
- MLOps & Orchestration: MLflow (experiment tracking & model deployment), Kestra (workflow orchestration design for automated evaluation pipelines), Docker & Docker Compose (multi-service containerization)
- Monitoring & Data: Grafana (dashboard design — cost, latency, relevance, and feedback metrics), PostgreSQL (application telemetry & conversation logging)
- Web & Frameworks: Streamlit, Django, HTML5, CSS3
- Methodologies & Tools: Agile/Scrum (Product Owner), Git & GitHub, Retrieval Evaluation (Hit Rate, MRR)
- Productivity & Design: Microsoft PowerPoint (Expert), Microsoft Word, ICDL Certified
- Languages: English (B2 Upper-Intermediate — Duolingo English Test: 125), Arabic (Native)

FLAGSHIP PROJECT

AI Cat Vet — End-to-End RAG Application | *Solo Project · LLM Zoomcamp Capstone (DataTalksClub)* | 2026

- Designed and shipped a complete Retrieval-Augmented Generation system that grounds LLM answers in a veterinary case dataset, with a Streamlit chat interface and safety-focused prompt design
- Built and tuned the retrieval layer (minsearch), measuring quality with Hit Rate and Mean Reciprocal Rank (MRR); improved held-out MRR from 0.80 to 0.856 through boosted field-weight search tuning
- Implemented an LLM-as-a-judge evaluation pipeline comparing candidate generation models on answer relevance
- Designed a Grafana monitoring dashboard (8 panels: cost, latency, relevance distribution, user feedback) backed by PostgreSQL conversation logging
- Containerized the full four-service stack (app, PostgreSQL, Grafana, Kestra) with Docker Compose for one-command deployment; designed the Kestra orchestration workflow for the automated evaluation pipeline
- github.com/IslamOuda85/AI_Cat_Vet

ADDITIONAL PROJECTS & EXPERIENCE

Product Owner — MovePal (Computer Vision Rehabilitation Application) | 2026

- Owned the product backlog and led Agile/Scrum ceremonies for a web-based computer vision application guiding physically disabled children through gamified movement exercises
- Coordinated a cross-functional team of six through sprint planning, acceptance criteria, and release QA

Open-Source Contributor — AutoEmulate | *Gaza Sky Geeks* | 2026

- Contributing to an open-source project building machine learning surrogate models for epidemic simulation (SIR model)

Instructor — Java & Object-Oriented Programming | *Peer-Led Course*

- Designed and delivered an informal course covering Java fundamentals and OOP principles for fellow students

PowerPoint Freelancer / Digital Content Specialist | 2022 – Present

- Designs high-impact technical presentations for diverse clients, focused on clear information architecture and data visualization

EDUCATION

B.S. in Computer Engineering | *Islamic University of Gaza* | Expected 2028
- 3rd year — 96 of 156 credit hours completed; CGPA: 88.44/100

High School Diploma | 2022
- GPA: 96.4%

PROFESSIONAL TRAINING & CERTIFICATIONS

- LLM Zoomcamp — DataTalksClub (Completed — RAG capstone: AI Cat Vet)
- MLOps Mentorship — Zomra (In Progress)
- MLOps Mentorship — Model tracking and deployment with MLflow
- Probabilistic Machine Learning and its Mathematics
- Computer Vision and Neural Networks — Gaza Sky Geeks (CNNs with Keras)
- Introduction to Deep Learning with Keras — Coursera (IBM Skills Network)
- Machine Learning Deployment — Coursera
- Essentials of Machine Learning — Gaza Sky Geeks (60 hours)
- IT Foundations with Python — Gaza Sky Geeks (50 hours)
- Python Django Web Development — Vision Plus (40 hours)
- JavaScript Fundamentals
- ICDL (International Computer Driving License) — Islamic University of Gaza (40 hours)
- English Language Proficiency — Duolingo English Test: 125 (B2 Upper-Intermediate)