

JANA HUSSEIN

AI ENGINEER

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PROFESSIONAL SUMMARY

AI engineer with a focus on LLM systems, agentic workflows, and production MLOps. Built and deployed 9 end-to-end AI systems through the SE Factory AI Engineering bootcamp spanning multi-agent orchestration, hybrid RAG, drift-aware MLOps, and multi-tenant AI SaaS. Demonstrated a narrow ML classifier outperforming a zero-shot LLM on domain classification at ~8x lower latency and zero marginal cost.

SKILLS

Programming: Python, SQL, JavaScript

AI / ML: NLP, Deep Learning, Computer Vision (ConvNeXt), Ensemble Learning, Weak Supervision, Model Evaluation, Hyperparameter Tuning

LLM Systems: Hybrid RAG (dense+sparse, cross-encoder reranking), Multi-Agent Systems (LangGraph/LangChain), Tool-Calling Agents, Prompt Engineering, Playwright MCP, NeMo Guardrails

MLOps & Backend: MLflow, Drift Detection (PSI/ χ^2), CI/CD (GitHub Actions), Docker & Docker Compose, FastAPI (async), SQLAlchemy

Data & Infra: PostgreSQL, pgvector, ChromaDB, Redis, Supabase, MinIO/S3, ONNX, Vault, REST APIs, SSE

Frontend & Tools: React (Vite), Streamlit, Git, Pytest

Languages: Arabic (native), English (fluent)

PROJECTS

ProofLoop — Autonomous Web-Testing Platform github.com/JanaHsen/ProofLoop

Playwright MCP · LangChain · GitHub Actions · Python — Converts natural-language business flows into self-healing browser tests via live accessibility-tree navigation; runs in CI/CD with a statistical harness tracking false-pass/false-fail and verdict accuracy.

Drift Triage Co-Pilot — Self-Healing MLOps Platform github.com/JanaHsen/drift-triage-copilot

LangGraph · MLflow · Redis · FastAPI · Docker — Production MLOps stack with automated drift detection (PSI, χ^2), a multi-agent supervisor for triage and action, human-in-the-loop rollback gates, and a Redis DLQ-backed retraining queue.

Purser — Multi-Tenant AI SaaS github.com/Jawad-Mansour/concierge-ai-saas

PostgreSQL RLS · NeMo Guardrails · ONNX · GitHub Actions — owned and built the lean ONNX-backed model server, implemented platform + tenant guardrails with a sidecar, added redaction and red-team CI gates, and secured service-to-service auth via Vault (token/mTLS).

Maintainer's Copilot — OSS Issue-Triage Assistant github.com/JanaHsen/maintainers-copilot

Hybrid RAG · Transformers · pgvector/Qdrant · React — Hybrid retrieval (dense+sparse, cross-encoder reranking, query rewriting) plus a fine-tuned transformer classifier, shipped as an embeddable widget with CI gates on retrieval/generation F1.

Additional projects: Smart Travel Planner · Enterprise Document Classifier · Salary Prediction Platform · AI Real Estate Agent · Arabic Hate-Speech Detector · Quiz Web App · Resolve Decision Intelligence Assistant. Full code at github.com/JanaHsen.

EXPERIENCE

English Language Teacher — La Cite Culturelle, Dawha, 2022 – 2024

Taught English to grades 3–6:

- Developed and delivered lesson plans for grades 3–6.
- Designed assessments and progress-tracking materials.
- Adapted teaching approaches for mixed-ability classrooms.

CERTIFICATIONS & TRAINING

SE Factory — AI Engineering Bootcamp (2026) · SE Factory — Foundational Computer Science · SE Factory — Data Analytics Micro-Course · ZAKA AI — AI Fundamentals Bootcamp

EDUCATION

BSc in Data Science — Lebanese University, 2024 – 2027 (expected)

BSc in Biochemistry — Lebanese University, 2018 – 2024