SALEH ALGHAMDI

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PROFESSIONAL SUMMARY

AI Engineer specializing in **Arabic NLP** and **production LLM systems** for Saudi enterprises. Designed and deployed RAG system serving **1,500+ Arabic-speaking users** with 94% accuracy. Architected air-gapped GenAI infrastructure for data sovereignty compliance. Co-founded logistics AI startup operating across Saudi terrain. M.Eng Virginia Tech. Published researcher (15+ citations). Committed to advancing Saudi Vision 2030 AI initiatives.

PROFESSIONAL EXPERIENCE

AI Faculty & Technical Lead

King Khalid University, Abha | **Jun 2022 - Present**

- Designed production RAG system for 1,500+ engineering students in Arabic—achieved **94% retrieval accuracy** with sub-2-second latency
- Reduced student support response time **99% (48 hours → 60 seconds)** through automated Arabic language processing system
- Architected metadata-first retrieval pipeline filtering by year/department before vector search—reduced LLM payload **70%**
- Developed character-based chunking optimized for Arabic morphological complexity, outperforming standard English tokenization
- Deployed using LangChain, ChromaDB, Azure OpenAI with Docker. Supervise 10+ capstone projects aligned with Saudi Vision 2030

Co-Founder & AI Solutions Architect

Global Business Express, Riyadh | **Aug 2022 - Present**

- Co-founded logistics AI startup, scaled edge AI systems across 300-500 vehicles—contributed to **20% reduction in operational costs** through predictive maintenance and route optimization
- Deployed on-device ML (Random Forest on ARM Cortex-A72)—reduced cellular data costs **95%** through local inference
- Cut safety alert latency from **15 seconds to 200ms** by migrating anomaly detection to edge—critical for real-time crash response
- Engineered production data pipeline with SQLite buffer and exponential backoff—**zero telemetry loss** during network outages

Graduate Researcher, Edge AI & IoT

Virginia Tech, USA | **May 2021 - May 2022**

- Developed ML classifier for wearable sensors achieving minority-class F1 improvement from **0.39 to 0.91** using adaptive windowing across 131 hours of field deployment
- Published peer-reviewed research in Journal of Animal Science (**15+ citations**) on sensor fusion achieving 92.36% accuracy on power-constrained ARM devices

TECHNICAL SKILLS

AI/ML: Python, PyTorch, TensorFlow, scikit-learn, LangChain, LLM Fine-tuning, RAG Architectures, Arabic NLP

MLOps & Cloud: Azure OpenAI, Azure ML, Docker, MLflow, REST APIs, CI/CD

Edge & IoT: ARM Microcontrollers, Raspberry Pi, Sensor Fusion, Real-time Systems

TECHNICAL PROJECTS

Multi-Agent LLM Orchestration System | *https://github.com/Saleh079/multi-tool-agents*

- Production-ready Writer-Critic-Editor pipeline that reduced manual editorial review time by **90%** via automated audit loops

SecureCode: Air-Gapped GenAI API | *github.com/Saleh079/secure-llm-api*

- Air-gapped LLM inference service using FastAPI, llama.cpp, NGINX for **data sovereignty compliance**—enables offline GenAI for secure enterprise environments

EDUCATION

Master of Engineering, Computer Engineering | Virginia Tech, USA | May 2022 | Concentration: Intelligent Systems

Bachelor of Science, Computer Engineering | Taif University, Saudi Arabia | May 2016 | **ABET Accredited | First Class Honors (Top 5%)**

LANGUAGES

Arabic (Native) | **English** (Professional Proficiency)