NADER ABDELTAWAB

AI/NLP Engineer | Full-Stack Developer | Cloud Engineer | DevOps Engineer

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Location: Riyadh, Saudia Arabia

PROFESSIONAL SUMMARY

Software Engineering graduate skilled in AI/NLP, full-stack development, and cloud computing. Experienced in building production-grade systems with Python, Java, React.js, and AWS. Co-author of a Springer paper on Arabic NLP and developer of an empathetic Arabic mental health chatbot (LLM fine-tuning, microservices, WebSockets). Internship experience in fintech (Java EE, PostgreSQL) and hands-on projects in cybersecurity, cloud infrastructure, and MERN applications. Certified in AI (IBM, NVIDIA, Huawei) and AWS Cloud. Seeking entry-level roles in AI engineering, cloud architecture, or full-stack development.

EDUCATION

University for Modern Sciences & Arts (MSA), 6th October City, Egypt Sep 2022 - Jun 2026
Bachelor of Science in Computer Science

Sunlight International School, Riyadh, **Saudia Arabia** Sep 2019 – Jun 2022
American High School Diploma

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, HTML, CSS, PHP, C++, C#, SQL, Bash

Frameworks & Libraries: React.js, NestJS, FastAPI, Flask, Streamlit, Express.js, Jakarta Servlets, PyTorch, HuggingFace Transformers, Scikit-learn, TensorFlow

Databases & Caching: PostgreSQL, MongoDB, MySQL, Redis, ChromaDB

DevOps & Cloud: Docker, Kubernetes, AWS (EC2, VPC, ALB, Auto Scaling, Aurora, CloudFormation), Git

AI & ML Concepts: Natural Language Processing, Transformer Models, LLM Fine-Tuning, Retrieval-Augmented Generation (RAG), Machine Learning, Diffusion Models, Computer Vision

Other Tools & Concepts: RESTful APIs, WebSockets, Microservices Architecture, Full-Stack Development, Cloud Architecture, Cisco Packet Tracer, Postman, Jupyter Notebook, Katalon

EXPERIENCE

Fintech Development Intern Internship
Edafa Telecom Solution (1 month)
July 2025

- Completed a Fintech development track focused on building financial technology solutions.
- Demonstrated adaptability to new technologies within a fast-paced telecom and fintech environment.
- Developed the E-Wallet digital wallet web application as the primary internship project, implementing user authentication, transaction management, and a PostgreSQL-backed relational schema using Java EE and Jakarta Servlets.

PUBLICATIONS

Abdeltawab, N. A., et al. "*Cross-Language Modeling in Empathetic Arabic Chatbots.*" Springer Lecture Notes in Electrical Engineering (LNEE), ISRSD-2026 — **Accepted, In Press (2026).**

PROJECTS

Empathetic Arabic AI Chatbot — Production Microservices System (Graduation Project) (View Demo)
Technologies: Python, PyTorch, HuggingFace Transformers, FastAPI, NestJS, TypeScript, React, MongoDB, Redis, Docker

- Built full-stack Arabic mental health chatbot using PyTorch, HuggingFace, FastAPI, NestJS, React, MongoDB, Redis, Docker.
- Fine-tuned Qwen2 (3B) LLM with Arabic CoVe pipeline for empathy-quality responses and real-time crisis detection.
- Deployed scalable 4-microservice architecture with JWT auth and Redis caching.
- Reduced response latency to <200ms, validated via Postman API suites and Katalon UI automation.

E-Wallet – Digital Wallet Web Application (Internship Project) (View Demo)
Technologies: Java, Jakarta Servlets, PostgreSQL, JDBC, Maven, Gson, JSP, Apache Tomcat

- Developed Java EE digital wallet with PostgreSQL stored procedures, JDBC, and Jakarta Servlets.
- Implemented secure user authentication and transaction management deployed on Apache Tomcat.
- Delivered production-ready fintech solution during 1-month internship.

CyberRange – Cybersecurity Training Platform (View Demo)
Technologies: Kubernetes, Docker, NestJS, Next.js, MongoDB, Python, WebSockets

- Designed Kubernetes-based microservices platform (NestJS, Next.js, MongoDB, Python) simulating real-world attacks.
- Implemented ML intrusion detection system with XGBoost for real-time traffic classification.
- Enabled live telemetry and attack visualization for training environments.

CarZone – Automotive Services Web Application (View Demo)
Technologies: MongoDB, Express.js, React.js, Node.js, REST APIs, DaisyUI, TailwindCSS

- Built MERN stack platform with role-based dashboards for customers, mechanics, suppliers, and admins.
- Automated service workflows including inventory management and invoicing.
- Delivered responsive UI with JWT-secured access control.

Resilient Cloud Infrastructure on AWS (View Demo)
Technologies: AWS (EC2, VPC, ALB, Auto Scaling, Aurora), CloudFormation

- Designed fault-tolerant architecture with EC2, VPC, ALB, Auto Scaling, Aurora, CloudFormation.
- Achieved high availability across multiple availability zones.

Enterprise Network Simulation with Dynamic Routing (View Demo)
Technologies: Cisco Packet Tracer

- Configured EIGRP, OSPF, and RIPv2 routing protocols in Cisco Packet Tracer.
- Validated redundancy and failure recovery in enterprise-grade network simulation.

PROFESSIONAL CERTIFICATES

IBM (Artificial Intelligence Fundamentals)
NVIDIA (Generative AI with Diffusion Models)
Amazon Web Services (AWS Cloud Technology Consultant)
Huawei (HCIA-AI 3.5V)

ADDITIONAL SKILLS

Soft Skills: Problem-Solving, Team Collaboration, Adaptability, Research & Technical Writing, Time management
Languages: Arabic (Native), English (Fluent)