Mohamed Atwan

AI ENGINEER | NLP SPECIALIST

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Summary "We Can Change the World Through the Data"

Results-driven Data Scientist with **2 years** of experience in **Machine Learning(ML), Deep Learning(DL), Natural Language Processing(NLP), and Data Science**, skilled in **extracting insights** and **building data-driven solutions** with Focusing Now In **The AGENTIC AI & LLMS.**

Proven track record of Leading a Team to a top 5 **in MTC-AIC2 AI Competition** by leveraging **Deep Learning** and **advanced modeling techniques in Speech Recognition Systems.** And Leading Other Team to Top 8 **in Huawei Spark Infinity North Africa 24 Competition** by leveraging **AI Techniques In Our Supply Chain Solution** That We Introduced it.

NOW Actively engaged in **community knowledge-sharing** as **Huawei Cloud Developers Group (HCDG) Organizer**, with a focus on fostering **collaboration** and **innovation** in **data science, AI and Cloud Computing Areas.**

Education

Bachelor's Degree of Science in Artificial Intelligence, **Kafr Elsheikh University - Faculty of AI**   *2021 - 2025*

Specialized coursework in Machine Learning, Deep Learning, Data Science, Cloud Computing

Experience

Huawei Cloud Ecosystem

AI Engineer (Full – Time)   *October 2025 – Present*

- **End-to-End AI Development: Design, build, and deploy full-cycle AI solutions leveraging Huawei Cloud's advanced ecosystem—including ModelArts, Pangu Models, and cloud-native services.**
- **Lifecycle Management: Oversee the complete AI project lifecycle from data preparation, model training, and deployment to continuous monitoring, optimization, and performance tuning.**
- **NLP & Conversational AI: Develop and enhance NLP systems, intelligent chatbots, and automation solutions for customer-facing and internal projects.**
- **LLM Integration & Tuning: Integrate and fine-tune large language models (LLMs) to power smart conversational workflows and AI-driven applications.**
- **Tools & Technologies: Proficient in Python, TensorFlow, PyTorch, MindSpore, Kubernetes, and core Huawei Cloud services (OBS, ModelArts) to build robust, scalable AI pipelines.**
- **Cross-functional Collaboration: Work closely with cross-functional teams to translate business requirements into technical implementations aligned with industry best practices.**
- **Core Expertise: Cloud-based machine learning, large language model adaptation, MLOps workflows, AI automation, and driving AI innovation across regional projects.**

Shabab Mobtakeron (Under Supervised Of Ministry of Youth & Sports)

AI Instructor (Part - Time)   *October 2024 – April 2025*

- **Deliver interactive lectures on AI and deep learning concepts.**
- **Monitor students' progress through assignments and projects.**
- **Supervise and guide students in their graduation projects.**
- **Track and assess students' performance to provide feedback.**
- **Assist students in troubleshooting technical issues in their projects.**

Internship & Training

Information Technology Institute (ITI)

Business Intelligence Development Trainee (Full - Time)   *July 2024 – September 2024*

- **Gain experience in data warehousing, advanced SQL, Power BI, and Tableau.**
- **Design and optimize data warehouses for efficient management.**
- **Create an interactive dashboards to provide actionable insights.**
- **Applied business intelligence tools {PowerBI-SSMS-SSIS-SSRS} to solve business challenges.**

Digital Egypt Pioneers Initiative (DEPI)

Data Engineering Trainee (Full - Time)   *July 2024 – October 2024*

- **Master SQL for data management and optimization.**
- **Design scalable data warehouses for efficient storage and retrieval.**
- **Gain hands-on experience in Python for data processing and automation.**
- **Applied machine learning concepts and MLOps tools like MLflow and Hugging Face.**

Volteering Globally

Huawei Cloud Developer Group (HCDG) Organizer
December 2024 – Present

I Actively work to **Promote Huawei Developer Certifications and other educational programs across universities**. in addition to **Organize and participate in tech events** such as **hackathons**, **workshops**, and **seminars**. and **Build and manage a community of students** interested in **cloud computing**, **AI**, **and other emerging technologies.**

Microsoft Learn Student Ambassadors
"Alpha" then "Beta" Ambassador
September 2024 – October 2025

I Actively work to **empower students with advanced technology skills**. I focus on areas such as **Data Science**, **Artificial Intelligence**, and **Cloud Computing**, with a commitment to **sharing knowledge** through **workshops**, **events**, and **collaborative projects**. My role allows me to collaborate with fellow students to **leverage technology to solve real-world problems**.

Projects

Comprehensive Hadith Chatbot System (My Graduation Project)   LINK
September 2024 - june 2025
Role: Team Leader

- **Led the development** of an **advanced chatbot system** that delivers **authenticated hadiths**, **explanations**, and **actionable lessons**, empowering users **to apply prophetic teachings in their daily lives.**
- **Curated and preprocessed a custom dataset** of **authenticated hadiths** for **model training and knowledge retrieval**.
- Fine-tuned large language models (LLMs) **(QWEN 2.5 1,5B)** for **text generation and optimized embedding models** for semantic understanding using **Python, Hugging Face, and PEFT (LoRA)**.
- **Developed a Retrieval-Augmented Generation (RAG)** system with **LangChain and Qdrant** to ensure accurate and contextually relevant responses.

Automatic Arabic Speech Recognition (MTC-AIC2 – 5th Place)   LINK
May 2024 - September 2024
Role: Team Leader

Developed a Deep Learning-based Speech-to-Text system using DeepSpeech 2 (NVIDIA) for Modern Standard Arabic & Egyptian dialects in real-world noisy environments, And we Ranked 5th in the MTC-AIC2 competition, competing against top AI teams.

- Designed a robust **Automatic Speech Recognition (ASR) system** capable of handling **noisy speech data** from **movies, street conversations, and non-standard Arabic dialects**.
- Developed a **DeepSpeech 2-based architecture** using **CNNs & Combination (GRU & LSTM)** for high-accuracy transcription.
- **Applied advanced signal processing:** noise reduction, silence removal, and data augmentation to enhance recognition accuracy.
- Built **custom preprocessing pipelines** for transcript cleaning, feature extraction (**MFCCs, Spectrograms**), and model training.
- Overcame computational limitations by **leveraging cloud computing (Colab Pro)** for large-scale model training.

Additionally, there is more work available on my GitHub, where shared several projects related to
Data Science | Machine Learning & Deep Learning | Natural Language Processing (NLP)

Certificates & Licenses

Huawei Certified ICT Associate – Artificial Intelligence (HCIA-AI)
Issued Mar 2025 · Expires Mar 2028   Credential ID: 010102001855810026291409
HCCDA-AI – Huawei Cloud Certification
Issued Mar 2025 · Expires Mar 2028   Credential ID : HWENDCAIDA658987
HCCDA-Tech Essentials – Huawei Cloud Certification
Issued Jan 2025 · Expires Jan 2028   Credential ID: HWDCTEDA364117
Certified AI Fundamentals – DataCamp
Issued Aug 2024   Credential ID : N/A
Machine Learning Specilization – DeepLearning.AI
Issued Apr 2024   Credential ID : XPB5KNX3QT2C

Skills & abilities
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Machine Learning & Deep Learning Modeling
- **Traditional ML: Supervised** (Regression, Classification) & **Unsupervised** (Clustering, Dimensionality Reduction) techniques.
- **Deep Learning: CNN** (Computer Vision), **RNN/LSTM** (Time Series), **Transformers** (NLP), **GANs** (Generative Models).
- **Transfer Learning: Fine-tuning** and adapting pre-trained models (e.g., ResNet, EfficientNet) for domain-specific tasks.

Natural Language Processing (NLP)
- **LLM Fine-Tuning:** QWEN-2.5/3, Phi, DeepSeek, Llama 2/3.
- **Training Techniques:**
  - **Efficient Training:** PEFT, LoRA, QLoRA, RLHF, SFT.
  - **Frameworks:** Hugging Face Transformers, LLaMA-Factory, Unsloth, Lightning-AI, WandB, VLLM.
- **RAG & Agents:** LangChain, LangGraph, CrewAI, MCP and A2A.
- **NLP Tasks:** Text summarization, translation, sentiment analysis, chatbots, and AI Agencies.

Programming & Data Management
- **Python:** Advanced EDA (Pandas, NumPy, Matplotlib/Seaborn), PyTorch, TensorFlow, Scikit-learn, Hugging Face, Data analysis, Data manipulation, machine learning, and deep learning tasks.
- **Databases:** SQL Server, PostgreSQL, MySQL, FAISS, Qdrant (vector DBs for RAG applications).

Cloud Computing & MLOps
- **Azure:** Data Factory, Synapse Analytics, ML for orchestration, transformation, and model deployment.
- **Huawei Cloud:** Managed cloud-based ML workflows and data processing.
- **Automation Tools: N8N**, **Together AI** for workflow automation and scalable AI solutions.

Version Control & Deployment
Proficient in **Git**, **GitHub**, and **Docker** for **version control**, **code management,** and **containerization**

Data Pipeline Development & Data Analysis
- **ETL/ELT:** SSIS, SSRS, SSAS for data integration and reporting.
- **BI & Visualization:** Power BI, Excel for dashboards and actionable insights.

Other Tech Skills
Terminal/CLI | Code Quality | Agile/CI-CD | Security & Best Practices

Soft Skills
Leadership | Emotional Intelligence | Communication | Team Working | Problem Solving | Adaptability & Flexibility Mentorship & Coaching | Persuasion & Influence | Critical Thinking | Storytelling

Languages
English: B2 (EF-TEST - 4 Skills – 90MIN Test) | German: A1 (Beginner)