Mohamed Atwan

DATA SCIENTIST | NLP SPECIALIST

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Summary "We Can Change the World Through the Data"
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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 & Huawei Cloud Student Developer (HCSD) Ambassador**, with a focus on fostering **collaboration** and **innovation** in **data science, AI and Cloud Computing Areas.**

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

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

Experience
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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.**

Shabab Mobtakeron (Under Supervised Of Ministry of Youth & Sports)
Technical Support & Organizer (Part - Time)   **October** *2024 – Present*

- **Provide technical support during events, activities, and workflow to ensure smooth operations.**
- **Organize events and training sessions while coordinating trainees' schedules efficiently.**
- **Assist participants in troubleshooting and resolving technical issues for a seamless experience.**
- **Improve the training environment by managing logistical and organizational tasks.**

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.**

Volunteering Locally
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IEEE Kafr Elsheikh Branch
Head of Natural Language Processing   (Part - Time)   *October 2024 – February 2025*

- **Defined project roadmaps, ensuring team expertise in RNNs, LSTMs, GRUs.**
- **Mentored team members, designed training materials, and assessed skills in Machine learning, Deep learning and NLP.**
- **Collaborated with Students to build scalable pipelines for large-scale text processing (Sentiment Analysis Solution Both Arabic/English).**

Microsoft Learn Student Ambassadors, KFS Branch

Database Administrator (Part - Time)   *April 2023 - September 2024*

- **Manage the club's database infrastructure, ensuring optimal performance and data integrity.**
- **Design and optimize schemas for scalability and efficiency.**
- **Implement monitoring solutions to ensure continuous system availability.**
- **Collaborate with other teams to deliver tailored database solutions and troubleshooting support.**

Microsoft Learn Student Ambassadors, KFS Branch

Head of Data Engineering (Part - Time)   *September 2024 – March 2025*

- **Developed and executed the strategic roadmap for the Data Engineering track.**
- **Led and mentored a team of student mentors, ensuring effective execution of learning objectives.**
- **Fostered a collaborative, educational environment and provided ongoing guidance and support.**

Volunteering Globally
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Huawei Cloud Developer Group (HCDG) Organizer &
Huawei Cloud Student Developer (HCSD) Ambassador   *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 – May 2025*

I Actively work to **empower students with advanced technology skills**. I <u>focus on areas such as</u> **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**, while continuously learning and growing alongside a global community of innovators.

Projects
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Diabetes Prediction and Management System   *September 2024 - December 2024*
Team Leader That Developed an AI-powered solution to improve diabetes diagnosis and management

- **Computer Vision for Early Detection:** Applied a **transformer-based** model to analyze retinal images and detect early signs of diabetic retinopathy.
- **Risk Stratification Model:** Implemented a **machine learning** model to assess diabetes risk based on health metrics, **offering personalized recommendations.**
- **NLP-Based Medical Chatbot:** Designed an **AI-driven chatbot** to provide patients with timely health information, **answer questions**, and **offer support**.

Automatic Arabic Speech Recognition (MTC-AIC2 – 5th Place)   *May 2024 - September 2024*
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
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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

Courses

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Python Programming Basics – Information Technology Institute (ITI)	*May - 2021*
Applied Deep learning – Information Technology Institute (ITI)	*May - 2021*
Database Fundamentals – Information Technology Institute (ITI)	*September - 2021*
AWS Machine Learning Foundation – Udacity	*October - 2022*
Data Analysis With Excel And PowerBI – Integrated Training Academy (ITA)	*October - 2023*
Assessment for Data Analysis and Visualization Foundations – IBM	*October - 2023*
Introduction to Data Analytics – IBM	*October - 2023*
Excel Basics for Data Analysis – IBM	*October – 2023*
Data Visualization and Dashboards with Excel and Cognos – IBM	*October – 2023*
Python for Data Science, AI & Development – IBM	*December - 2023*
Machine Learning Specialization – Stanford University & DeepLeaning.AI	*April – 2024*

Skills & abilities

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Version Control & Deployment

Proficient in Git, GitHub, and Docker for version control, code management, and containerization, ensuring seamless deployment and collaboration.

Machine Learning & Statistical Modeling

Experienced in supervised and unsupervised learning techniques for predictive modeling.

Knowledgeable in Deep Learning models, including CNN, RNN, and Transformer architectures for complex data modeling.

Natural Language Processing (NLP)

Skilled in fine-tuning NLP models for LLMs like BERT, GPT-2, QWEN, Phi, Deepseek and ollama to solve language-based tasks.

Data Management & Programming

Python: Expertise in Exploratory Data Analysis (EDA), NLTK, Spacy, PyTorch, TensorFlow, Huggingface and Transformers for data analysis, manipulation, machine learning, and deep learning tasks.

Databases: SQL Server, PostgreSQL, MySQL, FAISS, Qdrant and Milvus for efficient data management and retrieval In eg .. RAG Systems .

Cloud Computing

Azure Data Factory, Azure Synapse Analytics, and Azure ML for orchestrating large datasets, transforming data, and deploying machine learning models.

Experienced in leveraging cloud-based solutions to automate workflows and enable scalable, efficient analytics and machine learning processes.

Data Pipeline Development & Data Analysis

ETL and ELT processes to efficiently extract, transform, and load data for analysis and reporting with SSIS, SSRS, SSAS and PowerBI & Excel.

Soft Skills

Leadership | Emotional Intelligence | Communication | Team Working | Problem Solving | Adaptability & Flexibility Mentorship & Coaching | Persuasion & Influence | Critical Thinking | Storytelling | Tech-Savviness

Languages

English: B1 (Intermediate) | German: A1 (Beginner)