# **Maha Moftah**

# Al and Machine Learning Engineer

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Cairo, Egypt

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mahamoftah

#### **Profile**

Passionate AI and Machine Learning Engineer. Have a robust knowledge in AI, Machine Learning, Deep Learning, Computer Vision, Natural Language Processing and Generative AI. Dedicated to ongoing learning in AI. Very interested in working on new, diverse, challenging and real-world projects to gain huge experience.

#### **Education**

10/2023 – 07/2024 Giza, Egypt 9-Month Diploma, Professional Training Program, AI and ML Track,

Information Technology Institute (ITI), Smart Village Branch

**Projects** 

Speech to Speech Avatar ☑

**Tools:** NVIDIA Omniverse Audio2Face, HuggingFace, Ollama API, LangChain, Gemini API, Groq API, OpenAI API, Pinecone, FAISS, Azure.

Customer Churn Segmentation ☑

Tools: Pandas, NumPy, Scikit-learn, SciPy, Optuna

• Homonyms Problem in Sentiment Analysis ☑

Tools: Pandas, Scikit-Learn, TensorFlow, RE, Groq, Transformers

Arabic POS Tagging ☑

Tools: Pandas, Scikit-Learn, TensorFlow, Networkx

Retinal Vessels Segmentation ☑

Tools: PyTorch, TensorFlow, Segmentation-Models, Flask

• Arabic Dialect Detection □

Tools: TensorFlow, Scikit-learn, SpaCy, Optuna, Flask, Render

• Employee Burnout Rate Analysis ☑

Tools: Scikit-Learn, Pandas, Plotly Express, Dash

Gender Differences in Choosing Jobs and Departments on Glassdoor ☑

Tools: Pandas, SciPy, NumPy, Seaborn.

Bank Customer Segmentation ☑

Tools: Pandas, NumPy, Matplotlib, Scikit-learn.

• Movie Recommendation System ☑

**Tools:** Factorization Machines, Scikit-learn, PyTorch, Pandas, Dash.

Toxic Comment Classification □

Tools: NLTK, SpaCy, Gensim, Scikit-learn, Optuna

08/2019 – 07/2023 Cairo, Egypt

## **Bachelor of Computers and Artificial Intelligence,** Helwan University

- Cumulative GPA: 3.93, Excellent with Honors.
- Graduation Project: A+

## **Professional Experience**

10/2024 – present
Cairo, Egypt

## Machine Learning Intern, Si-Vision □

- FastAPI, Python, REST APIs, Async Programming, API Testing (Postman), Logging
- MongoDB, Redis, Qdrant, AWS (S3)
- OpenAI, Perpelaxity, LangChain, Prompt Engineering, RAG, Semantic Search
- Microservices Architecture, Design Patterns
- Chatbot Development, Multi-Agent System, RBAC (Role-Based Access Control)

### **Courses**

04/2024 - 04/2024	AWS Academy Machine Learning Foundations, AWS Academy ♂
02/2024 - 03/2024	AWS Academy Cloud Foundations, AWS Academy ♂
01/2024 - 01/2024	IBM Databases and SQL for Data Science with Python, Coursera
09/2022 – 10/2022	Artificial Intelligence Intern, National Telecommunication Institute ♂
05/2022 - 07/2022	Machine Learning with scikit-learn, Datacamp ☑
07/2020 – 09/2020	<b>SQL Fundamentals Track,</b> <i>Datacamp</i> ☑

### **Technical Skills**

## **Programming**

Python, C, C++, Java, OOP, Data Structures, Algorithms, Problem Solving, PHP

#### **Machine Learning**

Supervised, Unsupervised, Reinforcement

## **Mathematics**

Linear Algebra, Probability, Statistics

## **Deployment**

Docker, FastAPI, Flask, Streamlit, Render, Dash

### **Data Analysis**

Data Exploration, Data Preprocessing, Feature Engineering, Data Mining

## Natural Language Processing (NLP)

NLTK, SpaCy, Gensim, GenAl, Speech Recognition.

#### **Computer Vision**

OpenCV, YOLO, GenAI, Digital Image Processing

## **Recommender Systems**

## **Data Visualization**

Matplotlib, Seaborn, Plotly, Power BI

## **Python Libraries**

NumPy, Pandas, SciPy, Pickle, Optuna, Qiskit

## **ML/DL Libraries**

Scikit-Learn, XGBoost, TensorFlow, PyTorch, Keras

#### **MLOps**

DVC, MLflow, CI/CD

#### **Databases**

SQL, NoSQL

#### **Big Data**

Hadoop, PySpark, Airflow, Hive, Kafka

## **Deep Learning Architectures**

CNN, RNN, LSTM, GRU, VAE, GAN, Transformer

## LLMs

RAG, CoT, LoRA, RLHF, HuggingFace, LangChain, Vector DBs, Similarity Search, Prompt Engineering

#### **Time Series**

Analysis, Forecasting

### Others

Git, GitHub, GitLab, Azure, AWS, Postman, Selenium, UiPath, Linux

## Languages

Arabic English