# MOHAMED SALAMA AI, ML Engineer

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## **Profile**

Enthusiastic AI Engineer with a strong background in artificial intelligence, machine learning, and deep learning. Skilled in developing and optimizing AI-driven solutions, with hands-on experience in various AI frameworks for building scalable models. Successfully completed the AI track at the Information Technology Institute (ITI), where I deepened my expertise in advanced AI techniques. Passionate about problem-solving, Data Science, Machine Learning, and LLMs, and seeking opportunities to contribute to impactful, innovative projects. I am eager to join a forward-thinking team where I can continue growing, contribute meaningfully, and help drive success through cutting-edge technologies.

#### **Education**

- 9-Month Diploma (ITI) Information Technology Institute, (MCIT) Ministry Of Communications And Information Technology,
   Artificial Intelligence and Machine learning track, Mansoura Branch. (Oct 2024 June 2025)
- Bachelor's in Artificial Intelligence, Kafr-El-Sheikh University, Faculty of Artificial Intelligence | GPA: 3.65 | (2020 2024)

## **Technical Skills**

- Programming Languages: Python, C, C++, SQL, NoSQL
- Programming Concepts: Object-Oriented Programming (OOP), Data Structures
- Mathematics & Foundations for AI: Mathematics for AI, Time Series Analysis, optimization
- Data Analysis & Visualization: Data Visualization, Power BI, Dash
- Machine Learning & AI: Machine Learning, Deep Learning, Reinforcement Learning, Recommender Systems, Natural Language Processing (NLP) & LLMs, Computer Vision
- M Deployment: MLOps, Cloud Infrastructure for Big Data, Big Data Processing, Spark & PySpark
- Development Tools & Environment: Git & GitHub, Linux, Agile Methodology
- Gen-AI: LLMs, Prompt Engineering, RAG, Agentic AI, CrewAI, LangGraph, LangChain,n8n

Natural language: Arabic (First Language) | English (Second Language → B2)

## **Internship & Scholarship**

- Computer Vision Intern ITI scholarship (July 2023 August 2023)
  - Learning the basics of computer vision.
  - Learn the core of computer vision.
  - Learn how to make advanced projects from A to Z using computer vision.
  - Learn how I can use computer vision in real life.
- AI&ML intern at Mentorness (January 2024 March 2024) certificate
  - Blood disease prediction (GitHub)
  - Stock market forecasting (GitHub)

## **Experience & Work**

#### Software Engineer at G2I (Sep 2024 – Mar 2025)

Remotely

• Supported the training and improvement of AI models by refining responses, rewriting Python code, and optimizing prompt structure.

## **Publications & Research**

- Human Gait Recognition for Security Systems" International Technology and Artificial Intelligence Forum (ITAF), Canadian International College (Oct 2024)

  Paper-link
  - Developed a novel security system utilizing computer vision and AI to analyze human gait patterns for non-intrusive identification.
  - Collaborated with a team of 7 researchers to achieve high accuracy rates in human identification through walking pattern analysis.

## **Project**

### Intelligent Security System Project (Graduation Project)

- o Role: Team Leader
- o Designed and implemented an AI-powered security system Integrated into a cohesive desktop application:
  - Gait recognition (GitHub)
  - Aggressive behavior detection (GitHub)
  - Car license plate recognition
  - Face recognition in crowded environments (GitHub)
  - Fall detection
- Clean Code Rewriter (<u>GitHub</u>)
  - o Technology: **Agentic AI** using CrewAI | Streamlit | langchain\_google\_genai.
- Smart Recruiter Assistant (GitHub)
  - o Technology: **RAG** using LangChain.
- POS Tagging with Arabic Dataset (<u>GitHub</u>)
  - o Technology: Hugging Face | Arabic Bert models | Fine-tuning.
- Credit Score Classification (GitHub)
  - o Technology: Machine Learning models | Data preprocessing techniques.
- Multi-Class Prediction of Obesity Risk Team project (GitHub)
  - o Role: Developer
  - o Technology: Machine Learning models | Data preprocessing techniques | Tableau.
- Hate Speech Classification (<u>GitHub</u>)
  - o Technology: NLP preprocessing (cleaning, tokenization, embedding, etc...) | Sequential models (RNN, GRU, and LSTM).
- Document clustering based on Wikipedia (<u>GitHub</u>)
  - o Technology: NLP preprocessing | Dimensionality reduction | Clustering techniques.
- Whether Image Recognition Team project (GitHub)
  - o Role: Developer
  - o Technology: Vision Transformers using Hugging Face | Prertained CNN models | CNN model architecture.
- Wind Speed Forecasting (<u>GitHub</u>)
  - o Technology: Time Series techniques | Deep learning (RNN,LSTM)