Ahmed Ayman El-Madawy

AI Engineer

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Professional Summary

AI Engineer from Egypt, specialized in data science and machine learning model development. Experienced in Computer Vision, Natural Language Processing (NLP), and building intelligent systems powered by Large Language Models (LLMs) and Retrieval-Augmented Generation (RAG). Skilled in designing, training, and deploying AI solutions that enhance decision-making and improve user experience. Passionate about leveraging cutting-edge AI technologies to solve real-world problems and deliver business value.

Technical Skills

Programming Languages: Python, SQL — Expert

Computer Vision & NLP: OpenCV, cvzone, NLTK, Hugging Face Transformers

Tools & Platforms: Jupyter Notebook, Google Colab, VS Code, Git/GitHub, Docker

Machine Learning & Deep Learning: Scikit-learn, TensorFlow, PyTorch, Keras

Generative AI & LLMs: RAG (Retrieval-Augmented Generation), LangChain, OpenAI APIs

Data Structures & Algorithms
Strong understanding of arrays, linked lists, stacks, queues, trees

Experience

AI Engineer Intern – Stock Square, *(Remote)* May 2025 – Aug 2025 | cairo, Egypt

- Developed and evaluated **Machine Learning and Deep Learning models** for **stock market prediction** and time series forecasting.
- Conducted **data preprocessing and feature engineering** on financial datasets to improve model accuracy.
- Implemented **predictive analytics pipelines** for analyzing stock price trends and market behavior.
- Applied advanced algorithms such as **LSTM, RNN, and regression models** for forecasting tasks.
- Assisted in visualizing financial data insights to support decision-making processe

AI Engineer Trainee – Instant, *Training Program* Jul 2024 – Aug 2025 | cairo, Egypt

Trained and optimized Machine Learning and Deep Learning models, achieving 98% accuracy in image classification tasks using Scikit-learn, TensorFlow, and PyTorch. Implemented a Computer Vision project (real-time fire detection) using Python and OpenCV with transformation techniques and alert automation. Built data pipelines for preprocessing, cleaning, and feature engineering of large datasets. Applied Natural Language Processing (NLP) techniques for text analysis and classification. Explored and implemented LLM-powered solutions with Retrieval-Augmented Generation (RAG) for intelligent information retrieval. Gained hands-on experience with deployment tools such as Docker and Git for version control and scalability.

Projects

Chat With CSV, *OpenAI, LangChain, Gradio* Jul 2025 – Jul 2025 | Short–term project

Built an interactive AI-powered application enabling users to upload CSV files and query data in natural language. Implemented data parsing and preprocessing pipelines to handle structured tabular data. Integrated with LLMs using LangChain to convert user queries into accurate data-driven responses. Designed a Gradio interface for seamless user experience, supporting real-time Q&A over CSV datasets.

Chat With Image, *(Python, OpenAI, LangChain, Streamlit)* Aug 2025 – Aug 2025 | Short–term project
Developed an interactive multimodal AI application allowing users to upload an image and ask questions about it. Implemented image-to-text feature extraction and integrated it withan LLM-based question answering system. Used LangChain for context management and Streamlit for building a user-friendly interface. Enabled real-time interaction between users and the AI system, providing intelligent responses grounded in the image content.

Plant Village Detection, *Python TensorFlow CNN* Jun 2025 – Jun 2025 | One–month project

Developed a deep learning model to classify plant diseases using the PlantVillage dataset. Applied image preprocessing techniques (resizing, normalization, augmentation) to enhance model performance. Achieved 99.54% classification accuracy using CNN architectures with TensorFlow/Keras.

Real-Time Face Emotion Recognition May 2025 – May 2025 | One–month project

Built and deployed a deep learning model to detect and classify human facial emotions from images and live video streams in real time.
Designed and trained CNN-based architectures for robust feature extraction and accurate classification across multiple emotion classes.
Implemented advanced image preprocessing techniques (grayscale conversion, normalization, and data augmentation) to enhance model accuracy and generalization.

Brain Tumor Detection| 99% Acc, *Python TensorFlow Keras* Feb 2025 – Feb 2025 | One–month project

Built a deep learning model using CNN for automatic detection of brain tumors from MRI scans.
Reached 99.54% classification accuracy.

Education

Bachelor of Science in Computer Science, Aug 2021 – Present | Cairo, Egypt
Higher Technological Institute

During my studies, I gained in-depth knowledge of Computer Science, programming, data analysis, and Artificial Intelligence. I participated in several practical academic projects, such as developing ML and DL models and performing data analysis, which helped me develop strong problem-solving skills and the ability to implement real-world technical solutions.

Soft Skills

Problem Solving
Ability to analyze problems and find effective solutions

Teamwork & Collaboration
Work effectively within cross-functional teams

Communication
Strong verbal and written communication skills and teamwork skills

Adaptability
Quickly adapt to new environments and tools

Time Management
Efficiently manage time to complete tasks within deadlines

Languages

- Arabic – Native
- English – Good