

Abdelrahman Ahmed El-Shahed

Machine Learning Engineer

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in Abdelrahman El-Shahed | 🌐 Abdelrahman-Elshahed

Summary

A Senior student with an AI major at MUST University, passionate about solving real-life problems and transforming data into useful information. Developing computer science skills and aspiring to become a professional AI engineer.

Education

Misr University for Science and Technology, Bachelor's of Information Technology Sep 2021 – Jun 2025
Majored in Artificial Intelligence

- GPA: 3.71/4.0

Skills

Languages: Python, C++, R, SQL

Mathematics: Linear Algebra, Calculus, Probability, Statistics

Machine Learning: NumPy, Pandas, Scikit-Learn, PyCaret

Data Visualization: Matplotlib, Seaborn, Plotly

Backend: FastAPI

Web Scraping: BeautifulSoup

Tools: Jupyter, Docker, MLflow, Google Colab, VSCode, Git/Github

Experience

Microsoft Machine Learning Engineer Intern, Digital Egypt Pioneers Initiative - Apr 2024 - Nov 2024
DEPI – Cairo · Hybrid

- Developed essential skills in statistics, linear algebra, and Python, crucial for data analysis and machine learning.
- Gained expertise in Azure AI and MLOps tools, improving model deployment and management in cloud environments.
- Learned to create basic GANs and utilize NLP with attention models, enhancing knowledge of modern AI applications.

Cloud Computing Intern - Huawei Egyptian Talents Academy (ETA), National Oct 2024 - Nov 2024
Telecommunication Institute (NTI) – Nasr City · On-Site

- Cloud infrastructure configuration and management.
- Storage and network optimization for virtualized environments.
- Hands-on expertise in Linux and OpenEuler systems.

DevOps Internship, Banque Misr – New Cairo · Hybrid Aug 2024 - Sep 2024

- Implemented and managed web servers and load balancers to ensure high availability and reliability for critical applications.
- Deployed and orchestrated containerized applications using Docker and Kubernetes, improving scalability and streamlining the deployment process.
- Leveraged AWS, Jenkins, and Terraform to establish CI/CD pipelines, automating workflows and accelerating development cycles.

Internship Trainee, CIB Egypt – Cairo · Remote

Jul 2024 - Aug 2024

Artificial Intelligence Intern, Electro Pi – Cairo · Remote

Aug 2023 - Dec 2023

Global Delivery and Operations Department Intern, Orange Business – Nasr City · On-Site

Jul 2023 - Aug 2023

Projects

Intelligent News Summarizer (RAG Model)

- Developed a comprehensive news processing pipeline that integrates web scraping, text summarization, categorization, and data storage, enabling efficient retrieval and analysis of news articles. Created a web application with FastAPI for keyword input and summary generation, alongside an interactive Streamlit tool for user-friendly article summarization.
- Tools Used: Python, FastAPI, Streamlit, BeautifulSoup, Transformers, ChromaDB, Replicate API, Docker, MLflow.

Machine Translation NLP (from English to Arabic)

- Created an English-to-Arabic translation system utilizing both a custom deep learning model with Keras and TensorFlow, and pre-trained models from Hugging Face Transformers.
- Tools Used: Python, TensorFlow, Hugging Face Transformers, Pandas.

Microsoft Maleware Prediction

- Developed a robust data analysis pipeline, using advanced feature engineering techniques to extract meaningful patterns from malware data, Built and evaluated multiple machine learning models, achieving state-of-the-art accuracy in malware classification.
- Tools Used: Python, Streamlit, scikit-learn (Logistic Regression, K-Nearest Neighbors (KNN), Decision Tree, AdaBoost, Gradient Boosting Machines (GBM), Random Forest), Pandas, NumPy, Matplotlib, Seaborn, MLflow, XGBoost, LightGBM, CatBoost, Pyngrok, Pickle.

Predict MyHome

- a house price prediction app for instant property value estimation based on user inputs.
- Tools Used: Python, Streamlit, scikit-learn (Linear Regression, Random Forest), pandas, NumPy, pickle.

Intelligent Email Filtering

- Created a spam detection system that classifies emails as spam or ham using machine learning techniques, specifically logistic regression, allowing users to filter unwanted messages effectively.
- Tools Used: Python, scikit-learn, pandas, Matplotlib; Algorithms: Logistic Regression, TF-IDF Vectorization.

Romania PathExplorer

- Created a Romania Map Solver application that enables users to find the shortest path between cities using BFS, DFS, Dijkstra's algorithm, and A* algorithms, with an interactive GUI (Tkinter) for easy navigation.
- Tools Used: Python, Tkinter, PIL (Python Imaging Library).

Barcelona Roomscape: Exploring Accommodation Dynamics

- Analyzed 17,230 Airbnb of room listings in Barcelona to explore trends in room types, availability, and pricing through visualizations and statistical summaries.
- Tools Used: Python, Pandas, Matplotlib, Seaborn, Random Forest, XGBoost, LightGBM, Pickle, Docker.

FlixScope: Netflix Insights and Recs

- Developed a Netflix data analysis and recommendation system that utilizes TF-IDF vectorization and cosine similarity to suggest similar movies and TV shows based on user preferences.
- Tools Used: Python, Pandas, Scikit-learn, Plotly, WordCloud.

Account Vista

- Created a banking system that utilizes a binary search tree for account management and a stack for transaction history, enabling users to perform operations like adding, deleting, depositing, and withdrawing funds.
- Tools Used: C++ , STL (Standard Template Library)