

Youssef Elzahar

Data Scientist

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GitHub: github.com/youssefelzahar

Kaggle: kaggle.com/youssefelzahar

Military Service: Exempted

Professional Summary

Good experience with Machine Learning and Data Science. Completed various projects using different algorithms and datasets. Skilled in Natural Language Processing (NLP), Transformer models, and finetuning. Proficient in Power BI, Pandas, and software engineering with a focus on backend using Laravel and MySQL. Kaggle Notebook Expert and current Data Scientist Intern at Fixed Solution.

Professional Experience

Full Stack Data Scientist Intern

Fixed Solution

July 2025 – Present

- Built AI agents using n8n triggers.
- Developed classic ML models and built Docker images.
- Deployed APIs using Flask.
- Develop RAG system chatbot can work with multi domains

ML for Data Analysis

NTI Digital Egypt Youth (Onsite)

December 2024 – January 2025

- Worked on ML models and data preprocessing.
- Competed in Kaggle competition "Home Credit Risk".

Freelance Data Analyst

FreelanceYard

April 2025 – Present

- Built an interactive sales dashboard using Power BI.
- Crafted KPIs using DAX: avg. unit price, quantity sold, discount distribution.

Education

Bachelor of Computer Science Elshrouk Academy October 2018 – June 2022

Technical Skills

Data Science: Machine Learning, Deep Learning, NLP, LLM, Python (Pandas, NumPy), Keras, Scikitlearn, Fine Tuning

Data Analysis: Power BI, Excel, MySQL, Python (Matplotlib, Seaborn)

Software: Data Structures, OOP, Docker, Laravel (Backend)

Languages

- Arabic: Native
- English: B2 Level

Projects

SmartFin – AI Personal Finance Advisor

GitHub

- Built a Python tool for spending analysis and trend forecastin
- Used NLP to classify transaction descriptions and SARIMA for forecasts.
- Created a Streamlit dashboard and integrated a smart chatbot.

Nurse Robot (Graduation Project)

Grade: Excellent

- Designed a robot to assist doctors during COVID using QR and face recognition.
- Built a website and mobile app for robot control and data communication.

CIBMTR – Equity in Post-HCT Survival (Kaggle)

Kaggle

- Achieved 63% score on survival prediction challenge.
- Used models like CatBoost, LightGBM, XGBoost, and Survival Forest. - Evaluated with c-index and ROC, performed extensive preprocessing.

Medical Chatbot (LLM Fine Tuning)

GitHub

- Fine-tuned TinyLlama-1.1B on HealthCareMagic-100k dataset using LoRA.
- Deployed with Gradio for real-time medical Q&A.

Autocomplete

GitHub

- Designed LSTM-based autocomplete system with NLP preprocessing (text cleaning, tokenization)
- I made other aproach by using glove - built frontend by using streamlit.

Autonomous Web Research Agent

Github

- Built an AI agent capable of autonomous web scraping.
- Integrated with n8n triggers for task automation and multi-step data collection.

Chatbot RAG System (In Progress)

- Building a chatbot that supports multiple domains and role-based access control.
- Uses vector DB embeddings, supports different types of documents, chat history management.
- Frontend built with Flutter and backend with FastAPI, MySql