Youssef Hatem

Ai Engineer

https://timsah.vercel.app/

Profile

AI Engineer with expertise in machine learning, deep learning, and data analysis. Skilled in Python, SQL, TensorFlow, and Power BI, with hands-on experience in RAG, Multi-Agent Systems, and Fine-Tuning LLMs. Passionate about AI innovation, problem-solving, and teamwork.

Education

Cairo University Sep 2020 – Jul 2024

Bachelor's Degree in Computers and Artificial Intelligence, specialized in Artificial Intelligence GPA: 3.11

Professional Experience

NTI, Artificial Intelligence (Intern)

Nov 2024 – Feb 2025

- Completed a 4-month AI training covering Machine Learning, Deep Learning, Data Engineering, Data Analysis, Computer Vision, NLP, RAG, Fine-Tuning, and Multi-Agent Systems.
- Gained hands-on experience with Python, CrewAi, SQL, Power BI, and deployment techniques.
- Developed soft skills in presentation, communication, teamwork, and problem-solving.

DEPI, Data Science (Intern)

Jun 2024 - Nov 2024

- Worked on data science projects within the Digital Egypt Builders Initiative (DEBI), focusing on data analysis and machine learning.
- Gained hands-on experience with Python, data preprocessing, Machine Learning, Deep Learning, ML Flow, Docker, and Streamlit.
- Enhanced leadership, teamwork, and time management skills.

EUI University, *Data Analyst (Intern)*

Aug 2024 - Oct 2024

- Participated in a data analysis training program with Lancaster University & the British Council.
- Applied Excel, Power BI, Python, and SQL for data visualization and analytics.
- Strengthened communication, problem-solving, presentation skills, and time management skills.

ITI, Artificial Intelligence (Intern)

Aug 2023 - Sep 2023

• Gained foundational knowledge in Artificial Intelligence, including Neural Networks and Deep Learning.

Projects

Multi-Agent Nutrition Food Expert, NTI graduation project ∂

- Built an AI-powered multi-agent system with a **Nutrition Expert Agent** using **RAG** for evidence-based dietary recommendations.
- Developed a **Cooking Assistant Agent** to analyze food images, identify ingredients, suggest recipes, and fetch YouTube tutorials.
- Integrated a **smart ingredient store** for real-time inventory tracking and meal planning.
- Used Python, LangChain, LLMs, RAG, CrewAI, Prompt Engineering, Docker, and Streamlit.

Bank Customer Churn Prediction \mathscr{D}

- Predicted customer churn using financial and demographic data.
- Built a machine learning pipeline in Python with Docker, Streamlit, and Git for deployment.
- Delivered a scalable model for churn prediction and retention strategy optimization.

Skin Disease Application, *Graduation Project ∂*

- Designed a mobile app for **skin disease diagnosis** with a **TensorFlow-based classification model** (98% accuracy on 7 diseases).
- Outperformed ResNet, Xception, AlexNet, and DenseNet.
- Integrated **Flutter** for UI, **NLP** for handling medical data, and deployed on **Railway**.

Sales and Profit Analysis Dashboard ∂

- Created an interactive dashboard with **Power BI** to analyze sales and profits by category, region, and shipping method.
- Leveraged SQL, Excel, and data modeling for data preprocessing and transformation.
- Delivered actionable insights through advanced **data visualization** for informed decision-making.

Skills

 Technical Skills Machine Learning. Deep Learning. Data Modeling Data Preprocessing Data Visualization. Multi Agents LLMs RAG Fine-Tuning ETL using SSIS SSAS 	Programming Languages and Tools Python. C++. Git / GitHub. Linux. Docker. MlFlow. Power BI. Microsoft 365 (Excel, Power Point, Word).	Frameworks and Libraries • TensorFlow • Keras • PyTorch • NumPy • Pandas • Scikit-learn • Matplotlib. • Plotly • Streamlit • Gradio	 Soft Skills Communication. Leadership. Story Telling. Team Player. Presentation Skills.
• 33A3	• 5QL.		

Volunteer Experience

Data Scientist Member, IEEE

Mar 2024 – Sep 2024

• Volunteered as an instructor in an AI community, delivering sessions on Power BI and Linear One Hot Encoding.

Awards

2nd Place, Sixth Computer Science Olympiad,

Jul 2024

Ministry of Higher Education

• Awarded 2nd place in the Sixth Computer Science Olympiad for a project on skin disease diagnosis, organized by Damietta University, Delta University, and the Ministry of Higher Education.

Certificates and Courses

Supervised Machine Learning | Coursera *∂*

Introduction to TensorFlow for Artificial Intelligence, Machine Learning | Coursera $\mathscr D$

Data analysis certificate | Udacity ∂

The Egyptian Ministry of Communications and Information Technology

LangChain for LLM Application | DeepLearning.AI $\mathscr D$

Multi AI Agent Systems with crewAI | DeepLearning.AI ∂

Practical Multi AI Agents | DeepLearning.AI ∂

Languages

English • • • • Arabic • • • • •