+201012917870   Alexandria, Egypt   hadeer108arafa@gmail.com   LinkedIn

Hadeer Arafa
DATA SCIENTIST

Objective

Experienced machine learning professional and data scientist with a strong background in NLP and computer vision, aiming to leverage over 3 years of expertise in developing and leading successful AI projects. Seeking to contribute my skills in LLMs, chatbot development, and data analysis to drive innovation and efficiency

---

Education

Mansoura University
Bachelor of Science in Computer Science and Control Systems

GPA: 4.0 (Ranked 5th, Excellent with Honors)

Experience

NLP Researcher at Owais Capital October 2023 – Present

Skills Applied:
LLMs, LangChain, LLamaIndex, RAG, Fine-tuning, Prompt Engineering, GPT, LLama2, Falcon, Alpaca, BERT, NLTK, AWS, Pipeline Development, Tool Optimization, Leadership, Project

Achievements:
- Developed SAMY Investment Copilot, a real-time financial chatbot, enhancing financial analysis tools and credit evaluation models.
- Reduced project costs by over 64% through optimization of latest frameworks and data preparation.

Teaching Assistant Mansoura University October 2023 - Present (Part-Time)

Assisting in various computer science courses, mentoring students, and supporting academic research.

Machine Learning Research Engineer at Ivy August 2023 - October 2023 (Volunteer)

Contributed to Ivy framework (open-source project) focusing on unifying machine learning frameworks, particularly in the Frontend and Internal AI Modules.

Machine Learning Engineer at Electro-Pi August 2021 - October 2023

Skills Applied:
NLP, Chatbot Development, Data Analysis, Computer Vision, GANS, RNN, LSTM, Transformers, Docker, FastAPI, React.js, Database Management

Achievements:
- Developed an Arabic chatbot reducing customer support response time by 40% and increasing satisfaction by 25%.
- Implemented CV projects for childcare and law enforcement, improving model speed by 2.6X through distributed training.
- Executed a person reidentification project for tracking criminals across multiple cameras.
- Assisted with over 12 PhD and master projects, including signature verification and brain signal

Technical Skills

•Python	•SQL	•Numpy	•Pandas	• Matplotlib	•EDA
•Machine learning	•Scikit-learn	•Deep learning	•Keras	•Tensorflow	•Pytorch
•Transformers	•LLM	•RAG	•Hugging Face	•LangChain	•LLamaIndex
•Vector Database	•NLTK	•NLP	•CV	•Fastapi	•Git
•Docker	•CI/CD	•Cloud Computing(AWS)	•Next.js		

Projects

SAMY Investment Copilot (Owais)

- Developed a real-time financial chatbot using Large Language Models (LLM) to provide investment advice and answer financial queries based on real-time data.
- Helped increase the model stability and reduce the overall cost by over 64% by cleaning and
- preparing the data and by enhancing the architecture of the pipeline

Arabic Chatbot (Electro-Pi)

- Developed and deployed an innovative Arabic chatbot project, incorporating free chat functionality and AI capabilities, resulting in a 40% reduction in customer support response time and a 25% increase in customer satisfaction.

Childcare CV Project (Electro-Pi)

- Implemented a computer vision (CV) project for childcare, utilizing state-of-the-art pretraining models and transfer learning techniques.
- Leveraged pretraining models such as Clip, ResNet50, and VGG to extract high-level features from child monitoring footage.
- Applied transfer learning to fine-tune these pre-trained models on the specific childcare dataset, improving the model's ability to recognize child actions and detect potential safety concerns.
- Increased the model speed by 2.6X using distributed training

Person Re Identification Project (Electro-Pi)

- Developed person reidentification project for law enforcement agencies, integrating transformers and pre-trained models such as ResNet50 and VIT for accurate identification of individuals across multiple cameras.
- Utilized transformer-based architectures to capture long-range dependencies and spatial relationships in surveillance footage, enhancing the model's ability to accurately match individuals across different camera views.