Tarek Ashraf

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EDUCATION

Ain Shams University   Cairo, Egypt
Bachelor of Science in Computer & Information Sciences, Minor in Artificial Intelligence   *Sept. 2019 – July 2023*

EXPERIENCE

Open-Source Contributor - MLflow & Scikit-learn   2025
- Contributed to **MLflow**, resolving a **bug in artifact deletion failures with MinIO**, improving **list_artifacts() and delete_artifacts() functions**.
- Enhanced **MLflow's artifact management**, ensuring seamless **MLOps workflows** and reducing system failures
- Improved **Scikit-learn's documentation discoverability**, adding **reference links** to API docs and User Guide (plot_feature_selection.py).
- Validated changes with **extensive testing, CI checks**, and code reviews, ensuring contributions meet **open-source best practices**.
- Collaborated with **core maintainers**, following structured **open-source development methodologies**.
- Contributions are scheduled for inclusion in the next Scikit-learn and MLflow releases.

Artificial Intelligence Engineer (Intern)   Oct. 2023 – Feb. 2024
RadicalX   *Remote*
- Assisted in **designing, developing, and testing AI models**, ensuring optimal accuracy and efficiency.
- Conducted **data analysis and preprocessing**, improving model performance and training efficiency.
- Supported **AI research activities** by experimenting with ML algorithms and contributing to documentation.
- Participated in **code reviews and debugging**, maintaining high-quality AI model implementations.
- Stayed updated with **latest AI trends and frameworks**, contributing innovative ideas to AI projects.

PROJECTS

AI-Powered Chatbot with LangChain & OpenAI | *Python, LangChain, RAG, Flask, HuggingFace, Agents*
- Built an **AI chatbot** using **RAG, LangChain, and ChromaDB**, optimizing retrieval accuracy and quality.
- Integrated **Agentic Orchestration** for **automated NLP processing**, improving decision-making between AI-generated responses and human escalation.
- Incorporated **VADER Sentiment Analysis** to adjust chatbot interactions based on real-time user sentiment.
- Developed a **PDF ingestion system**, enabling structured document-based query retrieval.
- Deployed the chatbot using **Microsoft/Phi-2** for cost-efficient, high-accuracy conversational AI.

AI-Powered Movie Recommendation System | *Python, Pandas, Flask, Numpy, K-Fold, Collaborative Filtering*
- Developed a **data-driven recommendation engine**, improving **content personalization**.
- Applied **collaborative filtering techniques**, optimizing **user experience**.
- Built **predictive models** to understand **viewer behavior trends**.

CERTIFICATIONS

LangChain for LLM Application Development - DeepLearning.AI • 2025
Machine Learning Modeling Pipelines in Production - Coursera • 2024
Machine Learning Data Lifecycle in Production - DeepLearning.AI • 2023
Unsupervised Learning, Recommenders, Reinforcement Learning - Coursera • 2023

TECHNICAL SKILLS

Programming: Python, SQL, Java, Javascript, C++, C#, R, Shell Scripting
AI & ML Frameworks: LangChain, AutoGen, Pandas, Numpy, TensorFlow, PyTorch, OpenAI, Scikit-learn
LLMs & AI Agents: Retrieval-Augmented Generation (RAG), Fine-Tuning, Vector Databases
Cloud & Deployment:Hugging Face, AWS, Kaggle, Google Colab, GitHub
Software Development: AI Backend Development, Database Integration
Libraries & Tools: Data Visualization, Model Evaluation, Cloud Computing (AWS, Google AI)