Fatima Zaidan

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Professional Summary:

AI Engineer specializing in Generative AI, LLMs, and RAG systems with hands-on experience deploying models to production. Skilled in fine-tuning, multi-agent design, tool calling, and MLOps pipelines, with expertise in Python, HuggingFace, TensorFlow, Keras, Scikit-learn, Docker, CI/CD, and AWS deployment (EC2), MLflow. Proven ability to design, implement, and deploy scalable AI solutions integrating APIs, Gradio, and PostgreSQL. Fast learner with a strong ability to independently acquire new skills and technologies, eager to grow and make a distinct impact in the AI/GenAI field. Passionate about building intelligent, practical AI systems that bridge research and real-world applications.

Skills:

AI & Machine Learning: Generative AI, LLMs, RAG systems, Fine-tuning, Multi-agent design, Tool calling

Programming & Frameworks: Python, TensorFlow, Keras, Scikit-learn, LangChain, HuggingFace, FastAPI

Deployment & MLOps: Docker, CI/CD, AWS (EC2), MLflow, API integration, PostgreSQL

Tools & Platforms: Gradio, CrewAI, DagsHub

Projects / Experience

1. RAG GenAl Assistant; Production Ready:

Built a domain-specific GenAI assistant capable of answering questions on GenAI, MLOps, fine-tuning, and RAG concepts.

- Implemented Retrieval-Augmented Generation (RAG) using LangChain with FAISS for fast, vector-based knowledge retrieval.
- Developed the API and user interface with FastAPI and Gradio for interactive querying and testing.

- Designed the system for future deployment with Docker, CI/CD, and AWS, ensuring scalability and maintainability.
- Demonstrates expertise in RAG and end-to-end GenAI system development, ready for production.

2. Travel Assistant Agent

- Developed a multi-agent travel assistant using CrewAI to plan complete trips and provide personalized recommendations.
- Designed specialized agents for: flight and hotel suggestions, tour planning, and destination advice.
- Implemented a coordinator agent to oversee all tasks and ensure smooth, consistent operation across the system.
- Integrated multi-agent orchestration to enable dynamic, context-aware planning for users.
- Demonstrates experience in multi-agent design, GenAI system integration, and end-toend AI project development.

3. Emotion Dataset Classification

- Fine-tuned a DistilBERT model on the Go_Emotions dataset for multi-class emotion classification.
- Implemented data preprocessing, tokenization, and label handling to ensure compatibility with the model and improve training efficiency.
- Integrated the model with LangChain to enable structured retrieval and context-aware responses.
- Gained hands-on experience in fine-tuning LLMs, and managing complex datasets.

Education

Master of Science in Telecommunication and Computer Engineering, Lebanese International University (LIU)

- GPA: 3.8 / 4.0
- Dean's list Honor