

AHMAD MAKKI

Lahore, Pakistan

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Experience

Scraperrs Lab

Feb. 2025 – Present

Associate AI/ML Engineer

Lahore, Punjab

- Worked on multiple computer vision projects, including model annotation using Roboflow, model training, testing, and evaluation.
- Developed FastAPI-based backends for inference and deployment of trained computer vision models.
- Containerized and deployed AI models using Docker, ensuring reliable and scalable integration into production environments.
- Handled client coordination and project reporting to align model performance with real world requirements.
- Created an automated workflow on n8n for an Agentic AI system to streamline data and model operations.
- Built a conversational chatbot using OpenAI Whisper, large language models (LLMs), and in-context learning for intelligent voice and text interactions.
- Integrated NLP and computer vision solutions across two ongoing projects, combining multimodal AI capabilities for enhanced outcomes.

Machine Learning 1 Limited

Jan. 2025 – Feb. 2025

Trainee - Bootcamp Data Science & AI

Lahore, Punjab

- Developed and implemented machine learning models using Python libraries such as NumPy, Pandas, Scikit-learn, and SciPy.
- Performed data preprocessing for both supervised and unsupervised learning tasks, including data cleaning, feature extraction, and normalization.
- Applied Natural Language Processing (NLP) techniques, including tokenization, stemming, and vectorization, to train and optimize text-based models.
- Worked with senior data scientists to refine model performance, ensuring effective deployment and evaluation of models.

Descon

Oct. 2024 – Dec. 2025

Trainee - Data Science & AI

Lahore, Punjab

- Worked on skills in Machine Learning, Natural Language Processing (NLP), and AI under structured training.
- Completed the *Natural Language Processing with Classification and Vector Spaces* course by Coursera, gaining expertise in text classification and vector space modeling.
- Completed the *Generative AI with Large Language Models* course by Coursera, learning about transformer architectures, prompt engineering, and fine-tuning techniques.
- Completed the *Docker Mastery: with Kubernetes from a Docker Captain* course by Bret Fisher on Udemy, gaining hands-on experience with containerization, orchestration, and deployment strategies.
- Worked with NLP tools such as SpaCy and NLTK to preprocess text, extract features, and build classification models.
- Enhanced SQL proficiency for efficient data querying, manipulation, and database management.
- Engaged with CS50 coursework to strengthen computer science fundamentals and problem-solving abilities.

Projects

Smart Conversational Agent for Mental Health Support | Python, ML, DL, NLP, LLMs

July 2024

- Developed a project on a Smart Conversational Agent to provide mental health support using various approaches.
- Implemented rule-based methods using CountVector, TF-IDF, and similarity matrices for initial response generation.
- Used retrieval-based techniques, including CNN, RNN, LSTM, GRU, and BiLSTM models, to retrieve appropriate responses based on user input.
- Incorporated generative-based models like GPT-2, GPT-3.5 Turbo, Cohere, MistralAi, and Ai21 Studio to create natural and empathetic conversations.

- Developed a predictive model to estimate students’ final scores based on initial assessments.
- Trained the model using previous course data and tested it with data, focusing on the transition from initial to final.
- Utilized datasets from morning sessions for training and afternoon sessions for testing, predicting student scores from the 5th activity onward.

- Deployed an ML model using Minikube on a pod and demonstrated NodePort/LoadBalancer access.
- Implemented replica scaling, scaling the pod to 1-5 replicas and displaying the IP address of the serving pods.
- Tested CPU saturation, scaled to two pods, and implemented autoscaling in Kubernetes for performance optimization.

- Deployed a RAG-based (Retrieval-Augmented Generation) system that allows users to upload PDFs and query extracted information using a Streamlit-based interface.
- Containerized the application using Docker to ensure consistency across environments.
- Pushed the Docker image to Docker Hub for easy distribution and version control.
- Deployed the containerized application on a server, ensuring smooth access and performance.

Education

Relevant Coursework

- | | | | |
|--------------------|------------------------|----------|------------------------|
| • Machine Learning | • Statistical Analysis | • MLOps | • Big Data Analytics |
| • NLP | • Tools and Techniques | • DevOps | • Research Methodology |

Certifications

- Prompt Engineering by DeepLearning.Ai
- LangChain Chat with Your Data by DeepLearning.Ai
- Python for Data Science, AI & Development by IBM
- Deep Learning Specialization by DeepLearning.Ai
- Natural Language Processing with Classification and Vector Spaces by DeepLearning.Ai
- Generative AI with Large Language Models by DeepLearning.Ai

Udemy

HackerRank

Technical Skills

Languages & Libraries: Python, Pandas, NumPy, NLTK, SpaCy, Scikit-learn, LLMs (GPT-3.5 turbo, GPT-4, Cohere, MistralAi, and Ai21 Studio, LLAMA3)

Developer Tools: VS Code, Jupyter Notebook, Google CoLab, Git, Docker, Kubernetes

Technologies/Frameworks: Linux, GitHub, Matplotlib, Seaborn