Hammad Ashraf

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SUMMARY

ML Engineer with experience developing and deploying LLM and ML solutions in cloud environments. Skilled in fine-tuning, prompt engineering, and model optimization using Python and frameworks like TensorFlow and PyTorch. Proficient in leveraging AWS for scalable training and inference. Experienced with RAG pipelines, LlamaIndex, and LangChain for building context-aware, production-ready LLM systems. Focused on building robust, production-grade ML applications.

SKILLS

LLM & Applied ML: Prompt Engineering, Fine-Tuning, Transformers, PyTorch, LangChain, OpenAI APIs
RAG Systems: RAG, C-RAG, Vector Stores (FAISS, Pinecone), Embedding Models, Context-Aware Retrieval, LlamaIndex, LangChain
Cloud & Deployment: AWS (S3, Lambda, SageMaker), API Integration, CI/CD, Model Serving (Triton, FastAPI)
Workflow & Automation: ML Pipelines, Airflow, Experiment Tracking (MLflow), Data Preprocessing
Collaboration & Ownership: Leading ML Projects, Cross-Team Coordination, Scalable Solution Design

EXPERIENCE

Data Engineer *(2024)*

Bytewise Ltd.

- Developed and optimized data pipelines for collecting, processing, and analyzing large datasets.
- Automated data processing workflows and integrated data for business reporting.

PROJECTS

License Plate Detection with YOLOv8 | *Python, YOLOv8, OpenCV* [View]

- ❖ Built a high-accuracy number plate detection system using YOLOv8m, achieving 91% mAP@0.5 after hyperparameter tuning and augmentation.
- ❖ Implemented a full training pipeline with custom dataset and performance tracking, reaching 38 FPS on GPU inference.

Volume Control with Hand Gestures | Python, OpenCV, MediaPipe, Pycaw [View]

- ❖ Built a high-accuracy number plate detection system using YOLOv8m, achieving 91% mAP@0.5 after hyperparameter tuning and augmentation.
- ❖ Implemented a full training pipeline with custom dataset and performance tracking, reaching 38 FPS on GPU inference.

Face Mask Detection with Deep Learning | Python, TensorFlow, OpenCV [View]

- ❖ Developed a real-time face mask detection system using CNNs and OpenCV for public safety applications.
- ❖ Achieved 98 percent accuracy on test data; deployed model on live webcam feed for real-time inference.

Sentiment Analysis on Twitter Data | Python, Scikit-learn, NLTK [View]

- ❖ Built a sentiment classifier for tweets using NLP techniques and machine learning pipelines for opinion mining.
- ❖ Improved F1-score to 0.89 by optimizing preprocessing steps and applying effective feature engineering.

EDUCATION

National University of Computer and Emerging Sciences (FAST) *(2024)*

Bachelor in Data Science

Coursework includes: Generative Ai, Deep Learning, Image Processing, Computer Vision, Big Data Technologies, Parallel and Distributed Computing and more.

CERTIFICATIONS

Data Visualization Certification *(2024)*

freeCodeCamp

- ❖ Built interactive charts and graphs using D3.js and JavaScript.
- ❖ Created dynamic dashboards that convey complex data insights clearly and effectively.
- ❖ Learned and applied best practices in visual storytelling and accessibility.

Projects: Browse My Visualization

Leadership & Community Engagement

Hosted Future Fest 2025 — Opened Pakistan's largest tech conference live on stage, representing the next generation of innovators. Watch Moment

Founder at Techonix — Lead a growing student-led initiative dedicated to teaching open-source tools, AI, and cloud technologies to early learners and university students. Explore Community

Organized Devathon — Lead the largest competition, engaging around 500 students across Ai competitions, hackathons, and speaker sessions. View