Fazeel Asghar

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EDUCATION

Islamia University Bahawalpur

Bachelor of Science - IT, Information technology

WORK EXPERIENCE

Safe Rh | *Jr. AI Engineer-Backend*   **On Site Bahawalpur**   Aug *2023 – May 2025*

- Fine-Tuned LLaMA for a Medical Chatbot, enabling AI-driven medical assistance.
- Integrated IoT Medical Devices with Django, enabling real-time patient monitoring.
- Trained ML Models for heart disease prediction using real-time patient data.
- Optimized Data Pipelines for seamless IoT-to-Django data transmission.
- Debugged & Optimized Systems to enhance data accuracy and performance.
- Collaborated with International Research Teams to align AI with healthcare needs.
- Developed a Scalable AI-Driven Rural Health Monitoring System. Check it out → https://safe-rh-mis.com/

UWS | *AI Research Intern*   **On Site Scotland**   *June 2024 - Aug 2024*

- Designed & Developed an AI-Integrated Smart Wheelchair with IoT-based vital signs monitoring for enhanced patient care.
- Implemented Obstacle Detection & Avoidance using YOLOv8n Lite, Arduino UNO, and ultrasonic sensors for autonomous navigation.
- Engineered Real-Time Health Monitoring by transmitting patient vitals to a remote MySQL database, ensuring continuous tracking and timely interventions.
- Designed & Optimized a Medical Database in MySQL to efficiently store and manage real-time health data from IoT sensors.
- Impact & Achievements: Improved mobility and healthcare accessibility for critical patients through AI-driven automation.

KEY PROJECTS

Small Autonomous Car (Taxi Simulation)   **Final Year Project**   *July 2025-Current*

- Designed and executed obstacle detection, path planning, and real-time navigation using GPS and sensors.
- Integrated a web-based interface for location selection, enabling automated pick-and-drop functionality.
- Utilized **Raspberry Pi**, **OpenCV**, and machine learning for efficient decision-making and safe autonomous movement.
- Created a **Django** interface with **PostgreSQL** and **AWS Lambda** function to enhance backend processing and scalability.

RAG-based Interview Q&A Generator   **Private Company**   *Mar 2025*

- Built a system that allows users to upload their resume/CV to generate tailored interview questions and answers. Integrated a **vector database** for efficient document retrieval and contextual relevance.
- Utilized **LangChain**, **FAISS**, and **Gemini API** to ensure high-quality, personalized responses based on the uploaded resume. **Check out here:** Resume Q&A Gen

Fine-Tuned Llama-2-Chat as a Django Web App   **University Project**   Jan 2025

- Created a **Django**-**based web** application integrating a fine-tuned Llama-2 chatbot trained on a university dataset.
- The chatbot assists students with academic queries, course details, and administrative support in real time.
- Implemented Hugging Face **Transformers**, **PyTorch**, **LangChain** and **PEFT** for model adaptation, with a user-friendly frontend for seamless interaction and dynamic response generation.

MLOPS Deployed (Vehicle Insurance & Weather Forcasting)   **Private Company**   Dec 2024

- Private company proposed these projects to use it as a Microservice on the client's prediction website, ensuring real-time processing and scalability.Deployed a weather forecasting system as a cloud-based Microservice, enabling accurate and automated predictions.
- Enforced MLOps practices, including **CI/CD** pipelines, **Docker** and **ECR** for seamless deployment on **EC2** and monitoring. **Click here:** Vehicle Insurance prediction & Weather Forcasting
- Optimized cloud infrastructure for enhanced model performance, reliability, and real-time data processing.
- Ensured efficient data ingestion and automated model updates for both applications.

SKILLS

Generative AI, LangChain, RAG, Fine-Tuning, Hugging Face Transformers, Large Language Models (LLMs), LORA, QLORA,

Computer Vision, Object Detection, MLOps, Mlflow, Model Deployment, AWS, EC2, ECR, S3, IAM, Docker, CI/CD,

Lambda, API Gatway, Django, FastAPI, PostgreSQL, MySQL, SQLite, MongoDB, Flask, Predictive Modeling, IoT, Sensors.