

Ammar Akbar

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SUMMARY

Aspiring AI Engineer and **BS Artificial Intelligence** student at **FAST NU** with a proven track record in architecting **Python-based data pipelines** and fine-tuning **Large Language Models (LLMs)**. Experienced in building end-to-end AI applications, including full-stack web integration with **React/Node.js** and **workflow automation using n8n**. Expert in **Prompt Engineering** and leveraging AI-augmented development tools to accelerate the delivery of intelligent, scalable solutions

EDUCATION

FAST - National University of Computer and Emerging Science
Bachelor of Science, Artificial Intelligence

Aug 2022 - Present

Work Experience

NEXIUM

Jun 2025 - Aug 2025

AI Developer Intern

Lahore

- **AI Automation (Recipe Generator):** Built an automated recipe generation system using **n8n** and **Gemini API**, creating efficient workflows to transform user dietary data into structured, AI-generated meal plans.
- **AI Integration (Quote Generator):** Integrated the **Gemini 2.0 Flash LLM** into a responsive React application, utilizing **Prompt Engineering** to deliver high-quality, topic-specific motivational content.

FAST - National University of Computer and Emerging Science

Sep 2024 - Jun 2025

Teacher Assistant of Programming Fundamentals

- Directed student development workflows by providing technical mentorship in **C++** and **feature engineering**; managed team-based project lifecycles to improve collaborative outcomes and system performance.

PROJECTS

Breast Cancer Detection System | Machine Learning | [link](#)

- Developed an end-to-end **Breast Cancer Classification** pipeline using supervised learning, implementing advanced **feature engineering** and **imbalanced data handling** (SMOTE) on clinical datasets. Conducted rigorous model benchmarking across multiple architectures to optimize for **Recall**, ensuring a high sensitivity for early detection.

Hybrid Travel Destination Recommendation | Recommender Systems | [link](#)

- Developed six LLM-based recommendation systems utilizing **Fine-Tuning** and **RAG** architectures to deliver explainable, human-like outputs. Integrated **FAISS** and **Annoy** for high-efficiency semantic retrieval, optimized via comprehensive evaluation of ranking and generation quality.

Disease Outcome Prediction System | Machine Learning | [link](#)

- Developed a multi-disease prediction system using **supervised classification** (SVC, Naive Bayes, Random Forest, etc.) to analyze patient features and assess disease likelihood. Managed the end-to-end pipeline from **feature selection** to **model comparative analysis**, focusing on predictive accuracy and clinical relevance.

Helmet Detection System | Computer Vision | [link](#)

- Developed a construction site helmet detection system using **YOLOv5** with transfer learning and dataset preprocessing. Evaluated model performance using mAP and deployed an inference pipeline for **real-time** worker safety monitoring.

Smart Exam sitting Plan using K-Means Clustering | [link](#)

- Designed a sitting arrangement system using **K-Means** Clustering to optimize student placement and minimize chances of malpractice during exams.

Skills

- **Languages and Platforms:** Python, JavaScript, Vercel, C++, Supabase, PostgreSQL, Postman
- **AI and Data Science:** Machine Learning, Deep Learning, Data Science, LLMs, Hugging Face, NLP, Prompt Engineering, Process Automation, Computer Vision