Athar Parvez

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LinkedIn — GitHub — Portfolio

INTRODUCTION

AI/ML Engineer & Research Assistant with 4+ years of experience deploying ML/LLM solutions to production, including RAG chatbots and fine-tuned models.

Research Interests: Artificial Intelligence, Machine Learning, Deep Learning, Large Language Model(LLM), Explainable Artificial Intelligence(AXI), Human–Computer Interaction (HCI)

EDUCATION

- **KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS (KFUPM)**
  (#67 QS Rank World Wide 2025), Dhahran, KSA
  M.S. in Computer Science, Jan 2024 – Present   GPA: 3.4/4

- **MAULANA AZAD NATIONAL URDU UNIVERSITY(MANUU)**
  Hyderabad, India
  B.S. in Computer Science, Aug 2016 – May 2020   GPA: 3.5/4

EXPERIENCE

- **Research Assistant**   King Fahd University of Petroleum and Minerals(KFUPM)
  Jan 2025 – Present   Dhahran, KSA
  Designed and executed ML experiments, built robust data pipelines for collection, preprocessing, and analysis. Analyzed large-scale datasets using PySpark, Pandas/NumPy, modeled with Scikit-learn, PyTorch, TensorFlow. Authored technical documentation and presentations, mentored undergraduates on research tasks and best practices.

- **Teaching Assistant (SWE-363)**   King Fahd University of Petroleum and Minerals(KFUPM)
  Aug 2025 – Dec 2025   Dhahran, KSA
  Supported three sections (∼90 students), led weekly labs and office hours. Managed GitHub Classrooms, Blackboard quizzes, and grading via Gradescope. Coached students on debugging, code structure, and software engineering best practices.

- **Machine Learning Intern**   SkillCraft Technology(SCT)
  Sep 2025 – Sep 2025   Mumbai, India
  Collected, cleaned, and structured datasets, established baselines and ran hyperparameter tuning. Evaluated models using appropriate metrics; documented findings and next steps.

- **Machine Learning Intern**   Elevvo Pathways(EP)
  Jul 2025 – Aug 2025   Cairo, Egypt
  Applied ML techniques to real-world tasks with mentor feedback and iterative improvements. Delivered working prototypes and concise reports highlighting impact and limitations.

- **Teaching Assistant**   King Fahd University of Petroleum and Minerals(KFUPM)
  Jan 2024 – Jan 2025   Dhahran, KSA
  Assisted in Python courses (∼60 students/semester), led labs and problem-solving sessions. Designed, administered, and graded lab tests and programming assignments.

- **AI/ML Engineer (3 years)**   Tata Consultancy Services(TCS)
  Apr 2021 – Jan 2024   Gurugram, India
  Built and deployed ML/DL models for financial use cases (classification, prediction, anomaly detection). Fine-tuned pre-trained models/LLMs (LoRA, QLoRA, transfer learning) on domain data. Delivered end-to-end pipelines: preprocessing, feature engineering, training, and deployment.

PROJECTS

- **iArabUI: Arabic iOS UI Dataset** (GitHub Link):
  Building a multimodal Arabic/RTL iOS UI dataset (target 5k+ apps / 500k screenshots) and implemented LLM-based auto-labeling, benchmarking GPT-4, Ferret-UI, and LLaMA against expert annotations to advance accessibility and HCI.

- **Churn Prediction for Fintech Retention Strategies** (Confidential):
  Developed a churn model for Drahim (Saudi based fintech company) to identify at-risk customers and support retention strategies.

- **Purchase Order Item Categorization** (GitHub Link):
  Processed multilingual purchase order text. Built an embeddings+clustering pipeline to improve categorization and spend analysis.

- **Duplicate Question Detection on Quora Dataset** (GitHub Link):
  Built an NLP pipeline on the Quora Question Pairs dataset to detect duplicate questions using preprocessing, feature engineering (fuzzy/token/length/semantic), and scikit-learn classifiers. Deployed an interactive Streamlit app on Heroku.

- **YouTube RAG Chatbot** (GitHub Link):
  Extracted transcripts, created embeddings (FAISS/Chroma), and generated answers via OpenAI/HF LLMs.

- **TCS BaNCS: AI-Driven Predictive Analytics** (Project Link):
  Fine-tuned ML/DL models and LLMs; integrated SQL pipelines; deployed microservices (Docker, Kubernetes, AWS).

PUBLICATIONS

- **Generalizable Diabetes Risk Stratification via Hybrid Machine Learning Models** (submitted to *Journal of Diabetes and Its Complications*, Q1; confidential).
  First author; developed hybrid ML models; led experiment design, clinical data preprocessing, and generalizability evaluation.

- **Usability Requirements Catalog for Modeling Dynamic User Interactions in Mobile Applications**(expert validation is going on).
  Graph-based catalog for dynamic mobile interactions (touch, gestures); maps factors (Efficiency, Learnability, Errors) to design/evaluation; expert-validated.

PROFESSIONAL SKILLS

- **Machine Learning & Deep Learning**: Python, Scikit-Learn, TensorFlow, PyTorch, Keras, OpenCV, Pandas, NumPy, NLTK, spaCy, GANs, Transformers, Feature Engineering, Hyperparameter Tuning (Optuna), Model Evaluation (F1-score, ROC-AUC, Accuracy), MLOps.

- **Generative AI**: LangChain, LangGraph, OpenAI, Gemini, HuggingFace, RAG, LLMs, Fine-tuning (LoRA/QLoRA, quantization), Transfer Learning, Prompt Engineering.

- **Automation & Orchestration**: n8n, Zapier, MLflow, LangFlow.

- **Cloud & Databases**: AWS, MongoDB, MySQL, Oracle.

- **Development & Version Control**: Git, Docker.

- **Web Development**: HTML, CSS, FastAPI, Streamlit, Flask (Postman, Thunder Client, Insomnia).

- **Visualization & Tools**: Matplotlib, Seaborn, PySpark, Tableau, Power BI, Excel, PowerPoint, Word.

AWARDS & DISTINCTIONS

- INSPIRE Science Award, Central Government of India   2012
- Science Scholarship for Innovative Projects, State Government of UP, India   2013
- KFUPM Graduate Scholarship *(highly competitive)*   2024
- 1st prize in technical presentation, Annual Technical Fest, CS&IT, MANUU 2018

PROFESSIONAL ACTIVITIES

- Affiliated Board Member, IEEE KFUPM Student Branch — 2025
- Primary Coordinator, Voluntary Work Unit at KFUPM — 2025

CERTIFICATIONS

- **Duolingo English Test** — Certified Proficiency (Sep 2024) (Duolingo)
- **Python Basics** — University of Michigan (Jan 2024), Credential ID: CZ8HXFHOXK8N
- **LangChain for LLM Application Dev** — DeepLearning.AI (Aug 2025)
- **Finetuning Large Language Models** — DeepLearning.AI (Feb 2025)
- **AI Agents in LangGraph** — DeepLearning.AI (Apr 2025)
- **n8n Course: No Code AI Agent Builder** — Simplilearn (Aug 2025)

REFERENCES

Dr Omar Jamal Hammad
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Dr Jameel Ahmed
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