



# Abdul Rehman (ML Engineer)

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[\[Link\]](#) | **Scopus:** [\[Link\]](#) | **Address:** House#7, Street#1, Makam-e-Hayat, Sargodha, Pakistan (Home)

## ABOUT ME

### Career Objective

To pursue an opportunity as an AI Developer within an AI-driven tech company, where I can apply my skills in machine learning, deep learning, and Agentic AI. I aim to contribute to real-world AI applications that deliver meaningful user value while continuously growing in a collaborative, innovation-driven environment.

### Career Summary

Recent BSCS graduate from the University of Lahore with a 3.9 CGPA, ranked second in class. As a research assistant in an AI lab, I developed and evaluated deep learning models for medical imaging, deepfake detection, and surveillance. I've also worked professionally as a backend developer on client-facing and public-sector software projects. More recently, I've been building independently — a retrieval-augmented generation system for document question-answering, a conversational agent with persistent memory, and a smart surveillance system deployed on Raspberry Pi that detects suspicious objects and delivers spoken alerts. Across these projects, I've trained transformer models for classification and generation, and built machine learning pipelines for data processing, training, and evaluation. I'm now looking to bring this research and hands-on experience into a role focused on applied AI.

## SKILLS

### Programming Languages

Python | Java | C++ | PHP

### Database Systems

SQL | PostgreSQL

### Tools

VS Code | Git

### Technologies

Agentic AI | Generative AI | Deep learning | Machine Learning | NLP | Prompt Engineering

### Frameworks and Libraries

OpenAI Agents SDK | LangGraph | LangChain | LangSmith | TensorFlow | Numpy | Pandas | SkLearn | Matplotlib

### Platforms

OpenAI Platform | Hugging Face | GitHub | Docker | Kaggle

## EDUCATION AND TRAINING

03/2022 – 02/2026 Sargodha, Pakistan

**BACHELOR OF SCIENCE IN COMPUTER SCIENCES** University of Lahore

Transcript: [\[Link\]](#)

**Website** <https://sgd.uol.edu.pk/> | **Field of study** Computer Science | **Final grade** 3.90 | **Level in EQF** EQF level 6

## WORK EXPERIENCE

**RESEARCH LAB MEMBER – VLCMATRIXLAB, THE UNIVERSITY OF LAHORE** – 04/07/2023 – Current – SARGODHA, PAKISTAN

- Collaborated with peers to build deep learning models for medical imaging & deepfake detection.
- Managed ML workflow including data preprocessing, model training, and hyperparameter tuning.
- Designed and optimized deep learning architectures using TensorFlow and Keras.

## WEB DEVELOPER (PRIVATE PROJECT) — REMOTE – 05/02/2025 – 13/03/2025 – SARGODHA

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- Built a niche WordPress blog from scratch with responsive UI and SEO best practices.
- Used Google Search Console to achieve full indexing in 3 days and 95+ PageSpeed score.
- Deployed a secure, scalable site aligned with long-term blogging goals.

## WEB DEVELOPER – TECHNDEVS INC. – 28/06/2024 – 13/08/2024 – SARGODHA, PAKISTAN

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- Worked on real-world projects using Laravel and WordPress with a focus on backend development.
- Handled routing, controller logic, and database management across active client projects.
- Collaborated effectively with the development team in a professional work environment.

Certificate: [\[Link\]](#)

## SOFTWARE DEVELOPER (REMOTE) – ABBASIA LIBRARY – 03/11/2024 – 03/12/2024 – BAHAWALPUR, PAKISTAN

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- Developed a library system for Abbasia Library using Laravel, and Tailwind CSS.
- Implemented modules for fine tracking, lost/overdue books, issue card generation, and user management.
- Worked remotely, gathering requirements and applying feedback through regular staff collaboration.

Certificate: [\[Link\]](#)

## PUBLICATIONS

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2026

**AI-Powered Surveillance Systems: A Comprehensive Review of Technologies, Applications, Challenges, and Deployment Considerations (Accepted)**

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**Journal Name:** WIREs Data Mining and Knowledge Discovery | **Publisher:** John Wiley & Sons (Wiley)

2025

**CADSNNet: Cross-Aligned Dual-Stream Network for Building Damage Assessment Using Disaster Satellite Imagery (Accepted)**

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**Journal Name:** ICCA 2025 | **Publisher:** IEEE

2025

**Enhancing Deepfake Video Detection: An Xception-CBAM-BiLSTM Framework with Attention Mechanisms (Accepted)**

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**Journal Name:** ICETCS 2025 | **Publisher:** Springer

2024

**[Enhanced Model for Sign Language Detection with Deep CNN: Achieving Perfect Accuracy in Hand Gesture Recognition](#)**

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**Journal Name:** INTERNATIONAL CONFERENCE ON INNOVATIVE COMPUTING | **Publisher:** IEEE

2024

**[Data-Efficient Wheat Disease Detection using Shifted Window Transformer: Enhancing Accuracy, Sustainability, and Global Food Security](#)**

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**Journal Name:** IEEE Transactions on Consumer Electronics | **Publisher:** IEEE

2024

**[Optimizing Diabetic Foot Ulcer Detection: Leveraging SSD and YOLO Architectures](#)**

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**Journal Name:** HONET | **Publisher:** IEEE

## PROJECTS

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### YOLO11 Intelligent Surveillance System – Final Year Project

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- Built a real-time surveillance system on Raspberry Pi using YOLO11 and Vision API for object detection and false positive reduction.
- Delivered spoken alerts via Piper TTS with a live web dashboard for monitoring and control.

[\[Link\]](#)

### LangGraph App Builder – Multi-Agent Code Generation

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- Built a multi-agent system using LangGraph and LangSmith where specialized agents collaborate to generate working apps.
- Implemented sandboxed file operations, full observability, and seamless agent coordination between agents.

[\[Link\]](#)

## RAG-Based Document Q&A System

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- Built a question-answering system using LangChain and Pinecone for intelligent document search over uploaded PDFs.
- Enabled semantic retrieval and accurate response generation from PDF content using vector embeddings.

[\[Link\]](#)

## AI Conversational Agent with Persistent Memory

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- Built a general-purpose assistant agent with persistent memory and conversation history using OpenAI Agent SDK.
- Enabled context-aware, action-capable interactions across sessions via tool calling capabilities.

[\[Link\]](#)

## Quora Question Pairs – Duplicate Detection

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- Trained an ML model using Scikit-learn to detect duplicate question pairs with NLP features, TF-IDF vectorization.
- Developed a Streamlit frontend with a FastAPI backend for real-time similarity predictions.

[\[Link\]](#)

## SMS Spam Classifier

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- Built an NLP-based SMS spam classifier using Naive Bayes, Random Forest, Extra Trees, and SVM with ensemble methods.
- Applied text preprocessing and feature extraction techniques to classify messages as spam or legitimate with high accuracy.

[\[Link\]](#)

## Deepfake Forgery Detection – Individual Term Project

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- Built a deepfake detection system using CNN models with TensorFlow/Keras trained on the Celeb-DF dataset.
- Applied hyperparameter tuning and evaluated model performance using precision, recall, and ROC-AUC metrics.

## CERTIFICATIONS

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30/06/2025

### Fundamentals of AI Agents Using RAG and LangChain (IBM)

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[\[Link\]](#)

28/06/2025

### Generative AI: Prompt Engineering Basics (IBM)

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[\[Link\]](#)

06/2025

### Project: Generative AI Applications with RAG and LangChain (IBM)

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[\[Link\]](#)

07/2025

### Generative AI Applications Specialist (IBM)

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[\[Link\]](#)

11/2025

### Fundamentals of Modern AI Python Level 1 (PIAIC)

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[\[Link\]](#)

10/2025

### Prompt and Context Engineering: Effective AI Communication Level 1 Certification Exam (PIAIC)

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[\[Link\]](#)

11/2025

### Fundamentals of Agentic AI Level 1 (PIAIC)

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[\[Link\]](#)

12/2025

### Level 2 Fundamentals of Agentic AI Professional Certification (PIAIC)

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[\[Link\]](#)

12/2026

**Agent Factory Fundamentals: Building Digital Full-Time Equivalents (FTEs)**

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[\[Link\]](#)

● **PRESENTATIONS**

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27/10/2025

**International Conference on Emerging Trends in Cybersecurity**

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[\[Link\]](#)

10/12/2024

**International Conference on Sciences for Future Trends**

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20/11/2024 – 21/11/2024

**International Conference on Innovative Computing**

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23/11/2024

**POCO-24 Workshop (Panel of Conference Organizers)**

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