

Muhammad Abbas

Software Engineer • AI / ML Developer • Flutter Developer

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SUMMARY

Fresh Computer Software Engineering graduate from UET Mardan with hands-on experience building end-to-end AI/ML systems and cross-platform mobile applications. Proficient in large language models, NLP pipelines, transformer fine-tuning, RAG architectures, and vector databases, with practical exposure to LangChain, LangGraph, and cloud computing on AWS. Developed four real-world projects spanning automated exam grading, multilingual abusive language detection, AI-powered document processing, and a live news aggregation app with a Flutter frontend and FastAPI backend. Passionate about engineering intelligent solutions that solve real-world problems with clean, scalable code.

EDUCATION

BSc, Computer Software Engineering Oct 2022 – Jun 2026
University of Engineering and Technology Mardan Mardan, KP

FSc, Pre Engineering Apr 2020 – Mar 2022
Pakistan Education Foundation Peshawar, KP

SKILLS

Programming Languages: Dart • Flutter • Python

AI/ML Learning: Retrieval-Augmented Generation • Fine-tuning • LLMs • Vision Model • Model Training • Chatbots • BERTScore

Frameworks and Libraries: Flutter • Sentence Transformers • LangChain • LangGraph

Database: ChromaDB • SQL • Firebase

Cloud & Computing: AWS • Kaggle GPU

Tools & Version Control: Git

Office Productivity: MS Word • MS Excel

PROJECTS

MarkMaster AI — Automated Exam Grading System [Final Year Project] Jul 2025 – 2026
github.com/Abbas11222/MarkMaster
AI-powered automated exam grading system

- ◆ Built two-pass Vision-LLM OCR (Groq, Llama 4 Scout 17B) with a CONTINUATION merging algorithm to reconstruct multi-page handwritten answers
- ◆ Designed an adaptive semantic scoring engine (BERTScore + Sentence-Transformers) reaching 0.86 Pearson correlation with human graders, cutting grading time by ~50% vs. manual scoring

Urdu Abusive Language Detection 2026
github.com/Abbas11222/abusive-Language-Detection
AI powered abusive sentence detection

- ◆ Fine-tuned XLM-RoBERTa on 33,670 Urdu sentences,
- ◆ OpenAI Whisper for live speech-to-text
- ◆ Streamlit dashboard with text/mic/batch modes.
- ◆ Trained on Kaggle GPU.

github.com/Abbas11222/clo_generation

An AI powered System that generates CLOs from course content

- ◆ Built an AI-powered CLO Generation System using Phi-3 Mini LLM and Facebook BART-large-MNLI, automating the extraction of Course Learning Outcomes and Skill Sets from uploaded PDF/Word documents with Bloom's Taxonomy alignment
- ◆ Engineered an intelligent document extraction pipeline supporting structured and unstructured course content via python-docx and pdfplumber, automatating manual CLO writing approaches

NEWS App

Jul 2026

github.com/Abbas11222/news_server

Flutter + FastAPI news app with a live web-scraping backend and progressive UI loading

- ◆ Built a FastAPI backend with a Python/BeautifulSoup scraper, thread-safe in-memory caching, and background threading, exposing 3 REST endpoints with automatic retry/backoff on failed requests
- ◆ Implemented progressive UI loading via a 1.2s polling sync loop — articles render individually as they're scraped instead of waiting on the full batch, replacing single-shot fetch with incremental rendering
- ◆ Architected the Flutter frontend using MVVM (Models, Services, ViewModels, Views) with Provider state management and fully reusable UI components across 6+ screens/widgets



CERTIFICATIONS

Foundation of Data Science and Machine Learning

2025

Coursera

Python Libraries For Data Science

2025

Simplilearn

Natural Language Processing

2025

Coursera



RELEVANT COURSEWORK

Data Structures & Algorithms

Object Oriented Programming

Design & Analysis of Algorithms

Deep Learning

Introduction to Data Analytics



LANGUAGES

English

Intermediate

Urdu

Conversational

Pashto

Native