Karimullah

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EDUCATION

Lahore Garrison University — Lahore, Pakistan
BS Computer Science — *October 2021 – July 2025*

PROFESSIONAL SUMMARY

I am a hardworking software engineer with a strong background in **Generative AI** and web development. I have hands-on experience with modern tools, especially in building **creative and interactive AI applications**. I'm looking for a role where I can contribute to meaningful projects, grow my skills, and help create solutions that make a real difference. I'm confident I can bring value and become a dependable part of your team.

TECHNICAL SKILLS

Python	JavaScript	C++	Java	PyTorch
Hugging Face	LangChain	CrewAI	Open AI SDK	Gemini SDK
Django	Flask	FastAPI	Streamlit	Tailwind
SQL	SQLite3	Firebase	JSON	Supabase
GitHub	VS Code	Linux	Jupyter Notebook	Cursor IDE

Experience

Junior AI Engineer (Remote)
VEX | Sep 2024 – Apr 2025

- Integrated AI features such as chatbots and smart search by working with APIs and LLM-powered services.
- Supported backend integration to enable real-time data interaction with AI-driven modules.
- Collaborated with senior developers to deliver scalable, user-friendly web components.

Embedded Software Team Lead (On-site)
UAVTECH | Mar 2024 – july 2024

- Built autonomous drone flight systems using Pix hawk and **Python**.
- Developed GPS-guided navigation and sensor fusion algorithms.
- Programmed real-time flight control and MAV Link communication.
- Implemented fail-safes like intelligent Return-to-Home and signal loss recovery.

Embedded Systems Intern (On-site)
Technocrafts | June 2023 – Dec 2023

- Practical application of embedded systems and real-time control for UAVs.
- Writing and debugging firmware using Python and C++.
- Flight dynamics, sensor calibration, and telemetry data handling.
- Hardware–software integration through communication protocols
- Fundamentals of autonomous navigation and system optimization.

PROJECTS

NEMO – Autonomous AI-Powered Personal Assistant Robot. *June 2025*

- Built an autonomous AI assistant using LLMs (LLaMA 3, Mistral, Gemini) for real-time language interaction, multi-turn dialogue, and intelligent task execution.
- Implemented Retrieval-Augmented Generation (RAG) via LangChain, and vector databases to enable memory-aware, multimodal, and domain-specific conversations.
- Integrated advanced features such as object detection, image classification, face recognition, translation, smart scheduling, personalized reminders, and "Follow Me" vision-based navigation.
- Developed custom pipelines for real-time sensor data processing, dynamic state handling, and AI output visualization using Python (FastAPI/Flask) optimized for edge deployment.
- Powered by Raspberry Pi 5 with onboard display, camera modules, encoder motors, and sensors.

AI-Integrated Library Management System For Lahore Garrison University. *Sep 2024*

- Led the end-to-end development of a modern, AI-enhanced library management system using Django and Tailwind CSS.
- Designed and implemented core modules for book and user management, borrowing workflows, fine calculation, and role-based access control.
- Integrated a Large Language Model (LLM) for intelligent ISBN-based metadata extraction, reducing manual input and improving catalog accuracy.
- Developed features including real-time book search, shelf location tracking, book tag generation, and filtered Excel data export.
- Delivered a secure, scalable solution that significantly improved library efficiency and user experience in an academic environment.

Al-Alim – AI Chatbot for Islamic Literature References . *Aug 2024*

- Developed an intelligent chatbot leveraging NLP and LLMs to provide authenticated references from the Quran and Hadith collections.
- Engineered a context-aware query system capable of understanding complex religious questions and retrieving accurate, verified citations.
- Integrated vector databases for efficient semantic search and precise reference mapping across multiple Islamic texts.
- Built using the Lang Chain framework to ensure seamless coordination between language models, database queries, and response generation.
- Designed a web-based interface for scholars, students, and general users to access verified Islamic literature quickly and reliably.

Virtual Admission Assistant – RAG-Based AI System for Lahore Garrison University *Jan 2024*

- Developed an AI-powered assistant to streamline the university admission process using Retrieval-Augmented Generation (RAG) with LangChain and vector embeddings.
- Built a web dashboard for uploading admission documents, generating semantic embeddings, and enabling intelligent responses to student queries.
- Enabled context-aware, LLM-driven support for answering questions related to admission criteria, deadlines, required documents, and campus policies.
- Improved student experience by providing fast, accurate, and personalized guidance through automated document understanding.