

# MUHAMMAD SHAYAN KHAN

## Full-Stack AI Developer & Agentic AI Specialist

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## PROFESSIONAL SUMMARY

Innovative AI Developer with expertise spanning full-stack development and generative AI technologies. Specialized in building agentic AI solutions, Large Language Model (LLM) applications, and Retrieval-Augmented Generation (RAG) systems that deliver measurable business impact. Demonstrated success in reducing processing time by 35% and increasing user engagement by 28% through AI-powered features. Passionate about leveraging cutting-edge AI to create intelligent applications while maintaining excellence in technical implementation and user experience.

## TECHNICAL SKILLS

**Agentic AI :** LLMs, Retrieval-Augmented Generation (RAG), Agentic AI, OpenAI Agent SDK, LangGraph, LangChain, LangSmith, Vector Databases (Pinecone), Chainlit, Prompt Engineering, Context Engineering, Natural Language Processing (NLP)

**Full-Stack Development:** React.js, Next.js, TypeScript, Tailwind CSS, ShadCN UI, Python, FastAPI, SQLAlchemy, PostgreSQL, MongoDB

**Cloud & Deployment:** Azure, Google Cloud, Docker

**Development Tools & Practices:** Git, GitHub, Agile Methodologies, AI Model Testing & Validation, LLM Observability, tracing and Evaluation

## PROFESSIONAL EXPERIENCE

CarZoomo | Minnesota, United States (Remote)

## **Full Stack AI Developer** | January 2025 – March 2025

- Engineered a natural language search engine using RAG and vector embeddings, enabling conversational queries (e.g., "family cars under \$50k") that increased search engagement by 35% and reduced bounce rates by 22%.
- Developed an AI-powered content generation system that automatically created engaging vehicle descriptions from technical specifications, reducing listing creation time by 40% and improving readability scores by 28%.
- Built responsive UI components with Next.js and TypeScript, implementing reusable design patterns that accelerated frontend development by 30%.
- Implemented automated email distribution system for leads and engagement reports, increasing open rates by 25% through personalized AI-generated content.
- Integrated AI models with backend systems using JavaScript, Node.js and MongoDB, ensuring seamless data flow between user interface and AI services.

## **PIAIC** | Islamabad, Pakistan

### **Gen Eng Team Member** | July 2023 – Present

- Created responsive frontend interfaces with Next.js and TypeScript, focusing on intuitive user experiences for AI powered applications.
- Researched and applied emerging AI technologies, staying current with industry best practices and implementing cutting-edge solutions.

## **LinkedIn** | Remote

### **Freelance Frontend Web Developer** | January 2024 - Present

- Implemented SEO optimization with AI-driven content strategies, increasing organic traffic by 35% for client websites.
- Delivered projects on time and within budget, maintaining a 100% client satisfaction rate through clear communication and quality deliverables.

## EDUCATION

**Bachelor of Computer Science** | Virtual University of Pakistan | October 2023 - Present

**Higher Secondary School Certificate in Computer Science (Grade-A)** | F.G Sir Syed College, Rawalpindi | March 2021 - March 2023

## CERTIFICATIONS

- Embedding Models: From Architecture to Implementation - DeepLearning.AI
- AI For Everyone - DeepLearning.AI (11/2023)
- Generative AI for Everyone - DeepLearning.AI (11/2023)
- Programming for Everybody - University of Michigan (11/2023)
- Introduction to Generative AI - Google Cloud Training Online (10/2023)

## FEATURED FREELANCE & VOLUNTARY PROJECTS

### Benefit Mine | AI-Enhanced Cryptocurrency Transaction Platform

Developed a sophisticated Next.js frontend for a cryptocurrency transaction platform.

**Technologies:** Next.js, Tailwind CSS, TypeScript, AI-powered transaction analysis & fraud detection, Framer, Formik, Shadcn UI

#### Key Achievements:

- Created responsive design with modern UI components, improving mobile conversion rates by 30%.
- Developed intelligent form validation with predictive input assistance, reducing user errors by 25%.

### Panaversity | AI-Powered Educational Platform

Developed a frontend of an educational platform leveraging generative AI for personalized learning experiences and content generation.

**Technologies:** Next.js, Tailwind CSS, TypeScript, Shadcn UI, V0

**Key Achievements:**

- Created responsive design with intuitive navigation, improving mobile user engagement by 35%.

## Millionaire Fastlane Chatbot | AI-Powered RAG Application

Built a Retrieval-Augmented Generation (RAG) chatbot that allows users to interact with and ask questions about The Millionaire Fastlane book with context-aware answers from the actual book content.

**Technologies:** Python, Streamlit, LangChain, SentenceTransformers, Pinecone, Groq (mixtral-8x7b-32768), PyPDF, Poetry

## Trend Analyzer Agent for LinkedIn

This agent's primary function was to identify the DNA of viral content. It scans social/news data for hot topics, summarizes them, and generates viral-style personalised LinkedIn posts. ([GitHub](#))

**Technologies:** Python, asyncio, Gemini API, Web Search, Openai Agents SDK, langsmith

## Ultimate Blog Post Agent

This project proves my ability to build complex, multi-step AI workflows. It uses sub-agents that gathers topic inputs and brand context, scrapes top-ranking blogs, and identifies content gaps. Utilizes GPT-4 sub-agents to generate outlines, conduct keyword research, and embed data-driven insights for SEO-optimized blog creation. ([GitHub](#))

**Technologies:** Python, asyncio, Gemini API, Web Search, Openai Agents SDK, langsmith

## Newsletter Agent

This project proves my scrapping capabilities, this agent generates two specialized newsletters: Masterlete Brief (longevity and performance) and Ortho Intel (orthopedic surgery and policy). The system automatically ingests research articles from multiple sources, intelligently selects the most relevant content, and creates publication-ready newsletters with automated Substack publishing. ([Github](#))

**Technologies:** Python, asyncio, LangSmith, OpenAI Agents SDK, Gemini API, Web Search, Playwright, pyppeteer, Google Docs API, Google Drive API, Brotli, Cloudscraper, BeautifulSoup, feedparser

## LANGUAGES

English (Proficient) | German (Beginner) | Urdu (Native) | Punjabi (Proficient) | Hindi (Expert)