

# MUHAMMAD USMAN

## AI AGENT & AUTOMATION DEVELOPER | FULL-STACK ENGINEER

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### PROFESSIONAL SUMMARY:

Full-stack developer specializing in AI agent systems and workflow automation with experience in Next.js, React, Python, and modern AI technologies. Proven ability to build production-ready applications using RAG systems, vector databases, and automated workflows

### SKILLS

- ✓ AI & Automation : OpenAI Agents SDK, RAG Systems, Qdrant, n8n, Model Context Protocol
- ✓ Frontend: Next.js, React, JavaScript, TypeScript, Tailwind CSS
- ✓ Backend: Python, FastAPI, Node.js, MongoDB, PostgreSQL, Supabase
- ✓ Tools: Git, Vercel, Docusaurus, REST APIs

### PROFESSIONAL EXPERIENCE

#### Full-Stack AI Developer | Personal Projects

Dec 2024 - Present

Developed over three production-ready AI applications utilizing the OpenAI Agents SDK, retrieval-augmented generation (RAG) systems, and workflow automation, showcasing expertise in contemporary AI architecture.

- Created an educational platform featuring a RAG-based chatbot leveraging the Qdrant vector database and Google Gemini, effectively serving users during the PIAIC hackathon competition.
- Developed an automated newsletter system using n8n for workflow automation and Supabase, completely eliminating manual distribution efforts.
- Implemented full-stack solutions employing Next.js, React, Python, and FastAPI, utilizing various database technologies, including MongoDB, Supabase, and Neon Postgres.
- Designed and deployed scalable applications on Vercel, ensuring optimized performance and adherence to SEO best practices.

Technologies: Next.js, React, Python, FastAPI, OpenAI SDK, n8n, Qdrant, MongoDB, Supabase, Neon Postgres.

### RELEVANT PROJECTS:

AI-Powered Educational Platform (Hackathon Project)

Next.js | Docusaurus | FastAPI | Qdrant | Google Gemini | Neon Postgres

[Live Demo](#) | [Source Code](#)

- Developed interactive digital textbook for Physical AI & Robotics with intelligent
- RAG-based chatbot serving as 24/7 teaching assistant
- Implemented vector embeddings with Qdrant for context-aware document retrieval, enabling AI to answer questions specifically from textbook content
- Built real-time text selection Q&A feature allowing users to highlight any text for instant AI explanations

Automated AI Newsletter System  
React | Supabase | n8n Workflow Automation  
[Live Demo](#) | [Source Code](#)

- Built automated newsletter platform delivering daily AI insights to subscribers through intelligent n8n workflow automation
- Designed React frontend with glass-morphism UI and implemented Supabase database with Row Level Security for subscriber management
- Created n8n workflows that automatically fetch subscriber data and trigger personalized email campaigns without manual intervention
- Implemented timezone-aware scheduling and form validation with real-time error handling

AI-Powered Portfolio with Intelligent Chatbot  
Next.js | OpenAI Agents SDK | MongoDB  
[Live Demo](#) | [Source Code](#)

- Developed interactive portfolio featuring AI chatbot assistant powered by OpenAI Agents SDK with custom knowledge base about professional background
- Integrated MongoDB for contact management system with data validation and secure storage
- Implemented serverless API routes in Next.js for efficient backend processing

## EDUCATION

Bachelor of Science - Software Engineering Virtual University of Pakistan	2024 - 2028
Certified Agentic AI Engineering (CAE) Presidential Initiative for Artificial Intelligence & Computing (PIAIC) Focus: Agentic AI systems, autonomous agents, intelligent automation	2024 - 2026

## CERTIFICATIONS

- ✓ Introduction to Model Context Protocol - ANTHROPIC
- ✓ Model Context Protocol: Advanced Topics - ANTHROPIC
- ✓ Fundamentals of Agentic AI - Level 1 & Level 2 - PIAIC
- ✓ AI For Everyone - DeepLearning.AI
- ✓ Advance Prompt Engineering - PIAIC

## ADDITIONAL INFORMATION

- Active contributor to AI development community through projects and learning initiatives
- Passionate about building autonomous systems and exploring emerging AI technologies
- Continuously expanding expertise in agentic AI patterns and workflow automation