

# Hamna Hameed

AI Engineer | Agentic AI Systems Builder

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## EXPERIENCE

### AI Engineer

Spiral Lab

September 2025 – Present

Remote, Lahore

- Architected and deployed production-grade agentic AI systems with domain-specific autonomous agents
- Built end-to-end AI infrastructure including RAG pipelines, vector databases (Pinecone, ChromaDB), deployment pipelines, and monitoring systems for production reliability
- Developed multi-agent orchestration systems using CrewAI and LangGraph for complex business automation; agents that take action, not just give recommendations
- Created custom MCP servers, sub-agents with isolated tool permissions, and intuitive conversational interfaces for complex AI workflows
- Integrated AI-powered development tools (Google Antigravity, Anima) into engineering workflows, achieving 3x productivity gains across the team

### AI Intern

Spiral Lab

June 2025– July 2025

Remote, Lahore

- Built Custom MCP which allows MCP Clients to send emails using Resend API.
- Worked with AI technologies such as MCP, RAG, building self-improving, conversational AI Agents, CrewAI based Multi-Agent Systems.
- Used different API (Twitter, Gmail, Gemini, Groq, Deepgram, FireCrawl)

## PROJECTS

### Historical Figure Storyteller | AI-powered educational application

- Multi-agent AI system that generates factual and informative story videos about historical figures.

### AI Data Analyst | Conversational Analytics Agent

- AI agent that analyzes uploaded CSV files, executes SQL queries using DuckDB, and answers user questions through natural language.

### AI Inbox Assistant | Agentic Communications Platform

- Agentic AI system that autonomously drafts email replies using internal knowledge bases, with human-in-the-loop editing before sending.

### Dastaan Hub | Social book tracking app

- Book exploration and reading-tracking platform with user profiles, personalized reading lists, reviews, posts, and an admin panel with real-time book notifications using SignalR.

## TECHNICAL SKILLS

**AI Infrastructure :** LangChain, LangGraph, CrewAI, LlamaIndex

**Agentic AI Systems:** Multi-Agent Orchestration, Domain-Specific Agents, Autonomous Task Execution, MCP Servers, Custom Tool Development

**RAG & Knowledge Systems:** Semantic Search, Vector Embeddings, Knowledge Base Design, Retrieval Pipelines, Pinecone, ChromaDB

**LLM Platforms:** OpenAI (GPT-4, Whisper, Vision), Claude/Anthropic, ElevenLabs, Multimodal AI

**Development:** Python, ASP.NET MVC, C++, C, React, Flask, PostgreSQL, Git, Vercel

## EDUCATION

### BSc Software Engineering

Punjab University College of Information and Technology, Lahore

2023 – Present

*Relevant Coursework:* Artificial Intelligence, Machine Learning, Data Structures & Algorithms, Database Management