

# Muhammad Hamad

Generative AI Engineer | Full-Stack Developer | Agentic Systems Specialist

muhammadhamad1104@gmail.com +92-302-1104820 [LinkedIn](#) [muhammadhamad.me](#) Islamabad, Pakistan

## Professional Summary

Generative AI Engineer and Full-Stack Developer with a strong academic foundation from Quaid-i-Azam University and hands-on experience building agentic AI systems, MCP-powered workflows, and scalable web applications. Skilled in orchestrating Model Context Protocol servers, integrating deep learning models with Python, and delivering robust end-to-end solutions with the MERN stack. I bring a practical, problem-solving approach to every project, with a consistent focus on intelligent automation, system efficiency, and high-performance software engineering.

## Hard Skills

- **AI & Machine Learning:** Generative AI, Agentic AI, MCP Server, Machine Learning, Deep Learning
- **Web Development:** MERN Stack (MongoDB, Express.js, React.js, Node.js), Tailwind CSS, Bootstrap, PHP
- **Software & Tools:** C++, Python, Java, Docker, Kubernetes, Git/GitHub, Postman, MySQL
- **Core CS:** Data Structures, Algorithms, OOP, Software Engineering, REST APIs

## Experience

### Generative AI Engineer – Crown Nova Technologies Limited

Oct 2025 – Jun 25, 2026

Location: Islamabad, Pakistan

- Engineered autonomous agentic AI workflows and integrated Model Context Protocol (MCP) to optimize contextual information for high-performance AI systems.
- Developed robust, context-aware AI tools using FastMCP, Claude Desktop, and stateful streaming patterns such as STDIO and StreamableHTTP.
- Architected AI-powered automation tools that connect large language models with real-world database ecosystems.

### AI/ML Engineer Intern – SoftechInc.ai

Jul 2025 – Oct 2025

Location: Islamabad, Pakistan

- Contributed to the development of DigiDine, a restaurant management system, by integrating an intelligent chatbot to automate customer query resolution.
- Developed predictive models and supported the deployment of machine learning solutions in a dynamic, remote-first environment.
- Collaborated on client-facing web architectures to ensure seamless integration between AI components and full-stack interfaces.

## Teacher Assistant – Quaid-i-Azam University

Sep 2025 – Jun 26, 2026

Location: Islamabad, Pakistan

- Assisting faculty in the Department of Computer Science with lab instruction and technical guidance for junior students in programming and AI fundamentals.

## Freelance Web Developer – Client Project

Mar 2025 – Jun 2025

Location: Islamabad, Pakistan

- Delivered a custom PHP-based Q&A platform for student-professor interaction with subject-wise dashboards and upvoting logic.
- Designed and normalized a MySQL database to manage academic queries and implemented a supervisor feedback workflow.

## Projects

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- **Bulao – Voice-First AI Home Services Platform:** Engineered a voice-first home services platform in Pakistan during the AI Seekho 2026 Hackathon. Built a backend and 6-agent orchestration swarm using FastAPI, Python, and DigitalOcean GenAI that automates provider discovery, ranking, pricing, booking, and post-service follow-up. Integrated a deterministic offline fallback mode and containerized the architecture for production readiness. [GitHub](#) | [APK Demo](#)
- **AI-OS – Unified AI Operating System & API Key Rotation Stack:** Architected and open-sourced a high-performance modular monolith system designed for agent routing, automated API key rotation, and real-time observability. Implemented a FastAPI core engine achieving sub-10ms event routing, a smart key manager using Celery, Redis, and Playwright, a Claude Code Proxy routing requests to fallback models (Gemini, Groq, OpenRouter), a Next.js admin dashboard, and Prometheus/Grafana observability pipelines. Containerized the entire 8-microservice stack using Docker Compose. [GitHub](#)
- **AI-Powered CV Generator (MERN + MCP):** Built a full-stack system using React 19, Node.js, and MongoDB that automates the CV lifecycle through natural language commands via Claude Desktop. Integrated MCP servers to fetch user data and generate professional PDFs in Europass, Modern, and Classic formats using Python and ReportLab.
- **Agentic Website Converter (FYP):** Developing an AI-driven tool to convert static UI designs into dynamic, functional MERN components using agentic AI orchestration.
- **Irf Wardrobe - Full-Stack E-commerce:** Designed and deployed a high-performance clothing store application using Node.js, Express, and MongoDB. Optimized backend performance and implemented a responsive UI with Tailwind CSS, replacing a legacy WordPress system for better scalability.
- **Neural Network Classification System:** Developed a multi-class classification model achieving 96% test accuracy using custom hidden layers and Adam optimization. Implemented early stopping and feature standardization to reduce overfitting and improve generalization.

## Education

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- **BS Computer Science** (*Graduation: 2026*) – Quaid-i-Azam University, Islamabad  
Relevant Coursework: Artificial Intelligence, Machine Learning, Deep Learning, Data Structures, Database Systems.
- **FSc** (*2020 – 2022*) – Punjab Group of Colleges, Kot Addu

## Achievements & Certifications

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- **Anthropic:** Introduction to Model Context Protocol & Advanced MCP Topics.
- **Google:** Google AI Essentials Certification.
- **Coursera:** Python for Everybody Specialization & Data Structures in Python.
- **QBCS Media Coordinator:** Awarded Shield of Appreciation for organizing the Zindgi Prize Collaboration.