

MUHAMMAD ALI IRTAZA

Senior Software Engineer

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PROFESSIONAL SUMMARY

Senior Full-Stack Engineer with 5+ years of experience architecting and delivering enterprise platforms, AI-integrated applications, and scalable cloud infrastructure. Reduced data processing time by 99% (200 hours to 2 hours for 100K records) and improved system reliability through AWS queue-based architecture. Experienced in leading development teams, mentoring engineers, and shipping production systems across healthcare, e-commerce, and AI domains. Silver Medalist, BSCS.

TECHNICAL SKILLS

Languages: TypeScript (advanced), JavaScript (advanced), Python (intermediate), SQL (intermediate)

Frontend: React, Next.js, Tailwind CSS, Shadcn UI, Redux, React Context, TanStack Query, React Hook Form, Zod, GSAP, Framer Motion

Backend: Node.js, Express, NestJS, Flask, GraphQL, REST APIs, WebSockets, Socket.IO, Server-Sent Events, Prisma, TypeORM

Databases: PostgreSQL, MySQL, MongoDB, Redis

Cloud & DevOps: AWS (SQS, S3, RDS, EC2, CloudFront, Scheduler, Transcribe), Docker, Docker Compose, GitHub Actions, Jenkins, Vercel

AI / ML: OpenAI API, LangChain, Ollama, RAG pipelines, vector databases, prompt engineering, embeddings, GitHub Copilot, Claude Code

Testing & Quality: Jest, TDD, E2E testing, Sentry (monitoring), Grafana

Tools & Practices: Git, GitHub/GitLab/Bitbucket, Jira, ClickUp, Agile/Scrum/Kanban, code reviews, pair programming, system design, Postman, Excalidraw

PROFESSIONAL EXPERIENCE

Seven Stacks

June 2023 – Present

Senior Software Engineer

Remote

- Led development of an enterprise healthcare dashboard serving 50+ medical specialties, integrating Microsoft SSO, calendar-based scheduling with bulk uploads, real-time chat, and file sharing — improving cross-team collaboration for distributed healthcare staff.
- Reduced data loading pipeline from ~200 hours to ~2 hours for 100K records by re-architecting the ingestion process, delivering a 99% improvement in processing throughput.
- Migrated fragile cron jobs to AWS SQS queues and AWS Scheduler, eliminating missed executions and improving background job reliability across production environments.
- Built AI-powered medical report search using OpenAI LLMs with speech-to-text input via AWS Transcribe, enabling clinicians to query reports by voice with cursor repositioning without restarting dictation.
- Developed a Python microservice with FFmpeg for AI-driven video automation, synchronizing audio/video tracks and merging clips while integrating FaAI workflows and Appwrite DB for metadata management.
- Created a RAG-based e-commerce chatbot using LangChain and vector embeddings, enabling natural-language product queries and recommendations with contextually accurate results.
- Mentored 3+ junior engineers on system design, performance optimization, and Agile best practices; led code reviews and architectural decision-making across multiple product lines.

Case Journey

Oct 2021 – June 2023

Software Engineer

Remote

- Delivered full-stack features for enterprise healthcare dashboards using React, Node.js, and GraphQL, supporting scheduling, real-time communication, and data management workflows.
- Built and maintained customer-facing portals with authentication, payment integration, and role-based access control, contributing to platforms used across multiple healthcare organizations.
- Implemented CI/CD pipelines using GitHub Actions and Docker, streamlining deployment processes and reducing manual release effort.

- Contributed to architectural decisions for scalable microservice patterns and coordinated feature delivery with cross-functional teams in Agile sprints.

Medicos Connect LLC

Full-Stack Developer

Feb 2023 – June 2023

Islamabad, Pakistan

- Built customer-facing healthcare portals in React and Node.js, owning end-to-end feature delivery from UI components to REST API integration.
- Resolved frontend-backend integration gaps and improved portal responsiveness, streamlining user workflows for clinical and administrative users.

KEY PROJECTS

TrueCare Medical Billing – Website & Admin Dashboard

2024 – Present

Next.js, TypeScript, Tailwind CSS, Shadcn UI, NestJS, PostgreSQL, React Hook Form, Zod, TanStack Query

- Developed a full-stack company website and comprehensive admin dashboard for a revenue cycle management firm serving 50+ healthcare specialties, featuring complex multi-step forms, optimized data fetching, and rich-text blog management with Quill editor.

Mental Health Chatbot (RAG + Ollama)

July 2025

Next.js, Flask, Python, Ollama, LLMs, RAG

- Built a privacy-focused mental health chatbot using retrieval-augmented generation with local Ollama LLMs, implementing streaming chat UI and solving challenges around context retrieval latency and on-device data privacy.

Digi Hippo – Digital Marketplace

Dec 2023

Next.js 14, Tailwind CSS, MongoDB, Stripe, Shadcn UI

- Created a digital products marketplace with Stripe payment integration, secure file upload/download, user authentication, and product listing management for designers to showcase and sell digital assets.

EDUCATION

Capital University of Science & Technology

2019 – 2023

Bachelor of Science in Computer Science

Islamabad, Pakistan

GPA: 3.86/4.0 | **Silver Medalist** | 2 Chancellor's Honors | 5 Dean's Honors

Relevant Coursework: Data Structures, Algorithms, Databases, Operating Systems