

Muhammad Ali Khan

Full Stack Software Engineer

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Summary

Full Stack MERN Engineer experienced in building scalable production-grade applications using **React, Next.js, Node.js, Express.js, TypeScript, MongoDB, and PostgreSQL**. Skilled in designing REST APIs, authentication systems, real-time features, database architectures, and cloud deployments. Strong foundation in data structures, system design, debugging, and delivering end-to-end software solutions.

Technical Skills

Languages: Java, JavaScript, TypeScript, SQL

Frontend: React.js, Next.js, Redux Toolkit, RTK Query, Tailwind CSS, Material UI, HTML5, CSS3

Backend: Node.js, Express.js, REST APIs, JWT, OAuth, RBAC, Socket.IO, WebSockets, Microservices

Databases: MongoDB, PostgreSQL, MySQL, Redis, Prisma, Mongoose

AI: LLMs, Hugging Face, OpenAI API, RAG, LangChain, LangGraph, Fine-Tuning

Tools: AWS, Docker, GitHub Actions, CI/CD, Git, GitHub, Postman, Vercel, Render, API Testing, Agile/Scrum, Linux/Bash

Experience

Turing Nov 2025 – Mar 2026
AI Reasoning Engineer Palo Alto, CA, USA · Remote

- Evaluated and improved **Large Language Models (LLMs)** for code generation, algorithmic reasoning, context understanding, and software engineering problem solving
- Designed **Codeforces-style algorithmic challenges** and structured reasoning datasets to benchmark advanced coding capabilities of LLMs
- Contributed to **CL-Bench** with Tencent and Fudan University researchers, evaluating context learning across **1,899 tasks, 500 contexts**, and **31,000+ rubrics**
- Built an internal **LLM response extraction and defect analysis tool** to parse model outputs, detect malformed responses, and improve evaluation workflows

DevWeekends Aug 2024 – Present
Software Engineer Fellow & Technical Mentor Lahore · Remote

- Mentored developers through **10+ technical sessions** covering data structures, algorithms, full stack development, and software engineering fundamentals
- Built and deployed **3+ production-style applications** including NexVendor, Ilmo LMS, and SchoolVerse using MERN Stack, Next.js, and PostgreSQL
- Solved **280+ LeetCode problems** covering trees, graphs, dynamic programming, and advanced algorithmic patterns
- Guided developers through code reviews, debugging discussions, and engineering workflows across a community of **800+ fellows**

Projects

NexVendor | Live | GitHub | MERN, Redux Toolkit, Socket.IO, MongoDB

- Engineered a **multi vendor e commerce platform** with role based dashboards and real time chat functionality serving buyers, sellers, and admins
- Developed **20+ RESTful APIs** for authentication, products, orders, refunds, and payments, improving platform scalability and maintainability
- Implemented **JWT authentication**, SMTP verification, and centralized middleware based error handling to improve platform security and reliability
- Optimized frontend state management using **Redux Toolkit** and LocalStorage for authentication, cart, and wishlist persistence
- Designed scalable **MongoDB schemas** and integrated Cloudinary for efficient media storage and delivery
- Deployed distributed architecture using **Vercel, Render**, and dedicated Socket.IO services for real time delivery tracking

Ilmo LMS | Live | GitHub | Next.js, TypeScript, Redis, MongoDB

- Built a **full stack LMS platform** with learner and admin dashboards using Next.js, TypeScript, Express.js, and MongoDB
- Implemented **JWT and OAuth authentication** with Google and GitHub to improve onboarding and account security
- Integrated **Redis caching** for user sessions and course data, reducing average load times by approximately **40%**
- Improved API efficiency and frontend performance using **RTK Query caching** and optimized data fetching patterns
- Developed analytics dashboards with **ReCharts** and Tailwind CSS to visualize learning insights and platform activity
- Integrated **Socket.IO notifications** and VdoCipher secure video streaming to enhance user engagement and content protection

Education

University of Education Lahore
Bachelor of Science in Computer Science | CGPA: 3.74

2023 – 2027
Multan, Pakistan