

MUHAMMAD SOHAIL SHAHZAD

Associate Full-Stack Engineer

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SUMMARY

Associate Full Stack Engineer specializing in the **MERN** stack, with advanced expertise in modern frameworks including **Next.js**, **NestJS**, and **FastAPI**. Demonstrated success in building scalable, intelligent web applications, from responsive component-based UIs to high-performance asynchronous REST APIs. Adept at managing relational databases, implementing secure **JWT authentication**, and designing efficient data architectures. Proven ability to quickly adapt to new technologies and deliver robust, production-ready software solutions that meet complex business needs.

TECHNICAL SKILLS

Languages: JavaScript (ES6+), Python, C++

Frameworks & Libraries: Next.js, React.js, NestJS, Express.js, FastAPI, Node.js, Redux, Bootstrap, TailwindCSS, Chart.js

AI & Machine Learning: Logistic Regression, KNN, RAG, Antigravity, Cursor

Databases & ORM: PostgreSQL, MongoDB, Supabase, Prisma, TypeORM, SQLite

Tools & DevOps: Docker, Puppeteer, n8n, Git, GitHub, Postman, Railway, Netlify, Webpack, npm, Agile Methodology, Testing, Debugging

WORK EXPERIENCE

Associate Full-Stack Engineer | **AB Ark Pvt Ltd** | Lahore, Pk

May 2026 – Present

- **Architected** and maintained high-performance, scalable full-stack applications utilizing **Next.js**, **NestJS**, and **FastAPI**.
- **Enforced** secure authentication pipelines and **Role-Based Access Control (RBAC)** to protect sensitive application data.
- **Optimized** API response time by 20% by refactoring complex database queries and implementing Redis caching strategies.

Full-Stack Development Intern | **AB Ark Pvt Ltd** | Lahore, Pk

Feb 2026 – Apr 2026

- **Engineered** responsive, SEO-friendly full-stack web applications using **Next.js App Router** and **React**, following a clean, component-based architecture and optimizing performance via lazy loading and dynamic imports.
 - **Developed** scalable **REST APIs** with **Express.js** and **NestJS**, implementing full CRUD operations, centralized error handling, and robust security including **JWT authentication** and **RBAC** middleware.
 - **Reduced** application load time by 30% through the implementation of lazy loading, dynamic imports, and image optimization techniques.
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PROJECTS

ABA Therapy Management System

- Engineered a high-performance, asynchronous REST API backend using **FastAPI** to streamline therapy scheduling, patient progress tracking, and practitioner workflows.
- Designed robust relational database models to ensure strict data validation, serialization, and efficient querying of complex behavioral and session data.
- Implemented secure authentication and authorization mechanisms to protect sensitive user and patient records, ensuring strict data privacy and compliance.

Tech Stack: FastAPI, Python, React.js, PostgreSQL, Pydantic, Uvicorn, REST APIs, AWS OCR text-extract.

ClassBot - Autonomous AI Meeting Orchestrator

- Engineered a distributed microservice pipeline by containerizing the Evolution API via Docker to act as a secure WhatsApp gateway, routing real-time messaging payloads through local n8n webhooks for processing.
- Developed a self-healing headless browser engine using Node.js and Puppeteer to navigate meeting UIs, bypass security protocols, and join multi-platform sessions (Zoom, Teams, Meet), featuring a DOM-polling protocol for automatic reconnection.
- Architected a real-time remote command center in Next.js with Clerk Auth, integrating the Google Gemini API to intelligently process and execute remote commands while bypassing local NAT firewalls.

Tech Stack: Next.js, Node.js, Express.js, Puppeteer, Docker, n8n, Google Gemini API, Supabase, Clerk Auth.

CERTIFICATIONS

MERN Stack Web Development Certificate

EVS (Educational & Vocational Services) / 6 months / 2024

- Completed comprehensive training in MongoDB, Express.js, React.js, and Node.js.
- Designed hands-on full-stack applications and REST APIs.

EDUCATION

Lahore Garrison University Nov 2022 - Jun 2026

Bachelors of Computer Science (CGPA: 3.54)