SULAIMAN KHAN

Backend Software Engineer
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TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, SQL, C++, Bash
Frontend: React, Next.js, Redux, Tailwind CSS, HTML, CSS, D3.js, Chart.js, PWA
Backend: Node.js, Express.js, FastAPI, REST APIs, Socket.IO, JWT, OAuth, Firebase
Databases: MongoDB, PostgreSQL, MySQL, Redis, Redis Streams , BullMQ, NeonDB, Drizzle ORM, Cloudinary
DevOps: Docker, GitHub Actions, CI/CD, AWS, PM2, Nginx
Payment Gateway: Cashfree, Razorpay
Testing: Artillery, k6, Jest, Postman

EXPERIENCE

Backend Developer | Techdock Labs (Apr 2026 – Present)

- Develop backend systems for multiple production applications including a creator collaboration platform.
- Designed and maintained **CI/CD pipelines, Docker deployment**s, production monitoring, analytics and infrastructure improvements.
- Collaborate on backend architecture, API design, deployment automation and performance optimization.

Full stack Dev and Project Co-Lead | Docnish (Jun 2025 – Dec 2025) (https://www.docnish.com/Team)

- Started as a intern but got converted to full time Role.
- Architected the backend and frontend from scratch.
- Designed the complete **Cashfree and Razorpay** payment infrastructure processing **32K**+ production payments in four months.
- Co-led engineering across **nine production products** including booking, **CRM, CMS**, recommendation, search and order management.Delivered mission-critical features: service ordering, intelligent search, secured server-to-server payments, real-time reservations, invoicing, email OTP, accessibility compliance, and a multi-panel user experience.
- Designed a scalable system capable of handling **5,000+ concurrent users** and **300K+ monthly users,** with extensive optimizations in performance, SEO, and Lighthouse scoring; implemented load testing, unit testing, and E2E testing.
- Built scalable scheduling, reservation, notifications, Docker deployments, GitHub Actions CI/CD and AWS infrastructure.

FEATURED PROJECTS

Distributed Real-Time Communication Platform (https://demo-discord-seven.vercel.app/)

- Designed a horizontally scalable messaging platform to study software engineering principles used in large-scale communication systems.
- Implemented Redis Pub/Sub for multi-instance Socket.IO communication.
- Used Redis Streams as a Write-Ahead Log for durable event persistence and recovery.
- Built BullMQ workers for asynchronous notifications, retries and background processing.
- Implemented distributed Snowflake-style IDs, presence service, batching and adaptive flushing.
- Load tested using Artillery, sustaining **~16K messages/sec** while Redis Streams absorbed high burst traffic.
- Dockerized the complete platform and prepared it for distributed deployment.

Smart Traffic Intelligence Platform

- Designed an AI-assisted traffic management platform combining computer vision, graph neural networks and predictive analytics.
- Integrated **YOLOv8** models for vehicle, helmet and accident detection through FastAPI services.
- Converted vehicle detections into congestion scores for adaptive signal timing.
- Implemented **STGCN** for short-term traffic prediction and **DCRNN** for long-term forecasting.
- Designed architecture for emergency vehicle prioritization using **BLE-assisted** communication in low-connectivity environments.

- Proposed centralized monitoring capable of coordinating city-wide intersections with predictive optimization.

OTHER PROJECTS

Developer & Founder | NETZ |August 2024 – Present (https://netz-ruby.vercel.app/)

Interactive mathematics learning platform simplifying complex concepts through hands-on learning, serving over **5,000 monthly** users during its peak.

- Built a Progressive Web App with interactive problem solving, **gamification** and guided onboarding.
- Implemented numerical methods including Bisection ,Gauss-Seidel etc for standardized solutions.
- Optimized SEO, performance and user engagement through modular architecture.

Signaturely (https://signaturly.vercel.app/)

Developed a secure digital signature and document workflow platform.

RAG Conflict Resolution Assistant

Designing and developing a retrieval-augmented reasoning assistant capable of analysing conversation history, retrieving evidence and helping de-escalate disputes through grounded responses rather than hallucinated answers.

LEADERSHIP & ACHIEVEMENTS

- Co-Founder of Binary Battalions Coding Club under the HOD of the Computer Applications Department, Integral University.
- Team Lead of Binary Battalions, ranked Top 5 in Integral Internal Smart India Hackathon 2025.
- Team Lead of ASA and Semi-finalist at HackFiesta 6.0 organised by IIIT Lucknow.
- Organiser and **Question Setter** for Integral Prompt War 1.0.
- Strong interest in backend architecture, scalable software engineering, distributed systems and AI-powered applications.

EDUCATION

Integral University | Lucknow | BCA (Computer Applications) | May 2023 – 2026

ISC CMS | City Montessori School | 2021 | 93.75%

ICSE CMS | City Montessori School | 2019 | 92.00%

CERTIFICATES

React Certificate | **JavaScript Certificate**

INTERESTS

Outside software engineering, I enjoy designing large-scale **Redstone automation systems** in Minecraft, competitive strategy games(immortal in MLBB and grandmaster in league) , and exploring distributed backend architectures, AI systems, and infrastructure engineering through personal projects.