

BADSHA LASKAR

Senior Software Engineer | Full Stack AI Engineer

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PROFESSIONAL SUMMARY

Senior Software Engineer with 4.5+ years of experience building scalable SaaS platforms, distributed systems, and production AI applications. Specialized in Full Stack AI Engineering, Retrieval-Augmented Generation (RAG), agentic workflows, and cloud-native architectures. Delivered AI products serving 10,000+ users while leading engineering initiatives across enterprise and education technology domains.

TECHNICAL SKILLS

Frontend	React, Next.js, Angular, TypeScript, JavaScript, Redux/Zustand, Tailwind, React Native
Backend	Node.js, Express.js, Python, FastAPI, REST, GraphQL, WebSockets, JWT, OAuth2, RBAC
AI / ML	LangChain, LangGraph, Langsmith, OpenAI API, HuggingFace Transformers, RAG Pipelines, VectorDB, Guardrails, Agentic AI, MCP, Tool Calling, Multi-Agent Systems
MLOps	MLflow, Weights & Biases, DVC, Model Monitoring & Drift Detection
Databases	PostgreSQL, MongoDB, Redis, Elasticsearch, MySQL, Prisma ORM, SQLAlchemy,
DevOps / Cloud	Docker, Kubernetes (basics), GitHub Actions CI/CD, GCP, Azure, Terraform (basics), Nginx, Prometheus, Grafana, AWS, S3, ECS
Other	System Design, Agile/Scrum, TDD/BDD, Code Reviews, Mentoring, Swagger, Postman

EXPERIENCES

SDE II — Senior Full Stack AI Engineer

April 2026 – Present

Newton School of Technology

Sonipat, India

- **Leading development of production-grade AI-powered Learning Management System (LMS)** serving 10,000+ students, integrating LLM-driven content generation, adaptive quizzing, and semantic search using **LangGraph, pgvector, and OpenAI GPT-4o**.
- **Built a real-time AI code evaluation pipeline** leveraging function calling and structured output schemas, reducing manual grading effort by **70%** and providing instant, contextual feedback to students.
- **Spearheaded engineering best practices** - defined coding standards, architectural decision records (ADRs), PR templates, and conducted weekly knowledge-sharing sessions for a team of **8 engineers**.

Software Engineer — Full Stack Developer

March 2022 – April 2026

Zensar Technologies Ltd.

Pune, India

- **Owned end-to-end development of scalable full-stack applications** for **UK & US enterprise clients**, with features used by **thousands of users across production environments** daily.
- **Architected React-based frontend systems** with lazy loading, code splitting, memoization, and virtualized lists, improving perceived UI performance by **~25%** and Time-to-Interactive by **18%**.
- **Designed and deployed containerized Node.js microservices using Docker** with multi-stage builds and environment parity, cutting deployment and setup time by **40%** across dev, staging, and production.
- **Implemented secure authentication & authorization (JWT, RBAC, refresh token rotation)**, reducing login-related support tickets by **50%** and achieving compliance with enterprise security requirements.
- **Built and maintained AI-driven backend workflows** using **LangChain, vector databases (Pinecone), and streaming LLM APIs**, accelerating internal feature prototyping velocity by **35%**.
- **Optimized backend data pipelines** with server-sent event streaming, connection pooling, and async processing, cutting AI-related data-processing latency by **45%**.

- **Led CI/CD automation with GitHub Actions** — integrated test gates, coverage reporting, and staged rollouts, shortening release cycles by **30%** and raising test coverage to **~90%**.
- **Designed PostgreSQL schema optimizations** including composite indexes, materialized views, and query plan analysis, reducing p95 API response times by **35%** on data-heavy endpoints.
- **Acted as technical owner** of an internal analytics dashboard (**Angular + Node.js + PostgreSQL**), improving cross-team debugging visibility by **60%** and replacing a manual reporting workflow.
- **Mentored 3 junior engineers**, conducting structured code reviews, pairing sessions, and onboarding, resulting in measurable ramp-up improvement and higher PR quality.

CLOUD, SYSTEM DESIGN & MLOPS HIGHLIGHTS

- Designed **event-driven microservices architectures** with async task queues (Bull/Redis), message brokers, and circuit breakers for high-availability systems.
- Developed streaming AI applications utilizing structured outputs, **function calling**, and real-time inference delivery.
- Implemented **MLOps workflows** using MLflow for experiment tracking, model versioning, and registry management; integrated drift monitoring to trigger automated retraining on performance degradation.
- Deployed and supported cloud-native applications across **AWS, Azure, and GCP** environments using containerized workloads and managed services.
- Implemented **experiment tracking, model versioning, monitoring**, and deployment workflows using MLflow.
- Set up **Prometheus + Grafana dashboards** for real-time API health monitoring, latency percentile tracking, and alerting on error rate spikes.

PROJECTS

RAGOps Engine — Multi-Orchestrator Retrieval & Knowledge Intelligence Platform | [Live Demo](#) | [Code](#)

- Built a production-grade RAG platform leveraging **LangChain and LangGraph** to orchestrate complex retrieval, indexing, and reasoning workflows across heterogeneous data sources.
- Implemented advanced retrieval strategies including **Hybrid Search (BM25 + Dense Retrieval), Reciprocal Rank Fusion (RRF), HyDE (Hypothetical Document Embeddings), Query Expansion, Contextual Compression, and Multi-Query Retrieval** to improve answer relevance and recall.
- Indexed **5000+** documents using hybrid retrieval architecture with pgvector and BM25 achieving sub-second retrieval latency.

React Native Mobile Writing App — QuilKalam | [Live Demo](#) | [Code](#)

- Designed and shipped a **distraction-free writing app** with React Native + NativeWind achieving a **great user rating**, with rich-text editing, offline sync, and cloud backup.
- Implemented **offline-first architecture** with SQLite local storage and **Next.js SSR backend** for cloud sync, supporting 100+ active users with reliable cross-device state management.

DOCLIN — AI-Powered Educational Content Generation Platform | [Live Demo](#) | [Code](#)

- Built an AI-powered platform for students and educators to generate notes and examination papers from custom topics and syllabus inputs.
- Developed intelligent exam paper generation workflows supporting CBSE, ICSE, and custom curriculum formats with configurable difficulty levels, subject coverage, and question distributions.
- Integrated multiple LLM providers through **LangChain orchestration**, enabling **contextual content generation**, question synthesis, and educational material creation.
- Designed a full-stack architecture using **React, FastAPI, PostgreSQL, SQLAlchemy, and Docker** with secure authentication, role-based access control, and OAuth integrations.

EDUCATION

Bachelor of Technology — Computer Science & Engineering
Techno India University, Kolkata, India

2021, August