Aaroh Bhardwaj

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Summary

Backend and infrastructure engineer skilled in distributed systems, scalable APIs, high-throughput data pipelines, and production-grade GenAI systems. Strong focus on reliability, performance, correctness, and observability in real-world deployments.

Skills

- **Languages:** JavaScript, TypeScript, Python, SQL, C++
- **Backend:** Node.js, Fastify, NestJS, Express, Next.js, Docker
- **Databases:** PostgreSQL, MongoDB, Redis, Redis Streams
- **Infra & Messaging:** RabbitMQ, SSE, Pub/Sub
- **GenAI:** RAG, vector search, hybrid retrieval, semantic chunking
- **Systems:** JWT, RBAC, caching, rate limiting, tracing, metrics

Work Experience

Full Stack Developer Intern   Sep 2025 – Present
Phyniks Dreamlabs LLP, Bangalore

- Built scalable NestJS backends with DTO validation, guards, optimized queries, and caching, improving API performance by 30%.
- Developed SSR Next.js admin dashboards with sub-200ms TTFB and efficient server-side data fetching.
- Engineered PostgreSQL (Supabase) and MongoDB schemas with indexes, RLS, and real-time listeners for reliable multi-admin workflows.
- Added Redis caching, RBAC, audit logs, and background jobs for resilience, reducing DB load and improving dashboard speeds by 40%.

Projects

SentinelRAG — Production RAG System — [Live] — [Repo]   Jan 2026

- Implemented hybrid retrieval (BM25 + embeddings) with LLM-based reranking for high-precision context selection.
- Achieved sub-200ms retrieval latency via semantic chunking, caching layers, and async worker queues.
- Added per-stage tracing, structured logs, and evaluation metrics to measure accuracy and latency.
- Built a Fastify backend with Redis caching and PostgreSQL persistence for reliable query processing.

Invar — Distributed Metrics Ingestion Platform — [Live] — [Repo]   Dec 2025

- Built a Redis Streams ingestion pipeline handling 10K+ events/min with consumer groups and horizontal scaling.
- Designed a hot/cold storage system using Pub/Sub for real-time delivery and PostgreSQL (JSONB indexed) for historical analytics.
- Implemented DLQs, retry queues, batching, and idempotent processors for correctness under load.
- Delivered real-time dashboards using SSE with sub-second event propagation.

NexusFeed — Event-Driven Microservices Social Platform — [Live] — [Repo]   Nov 2025

- Architected a 6-service ecosystem: API Gateway, Identity, Posts, Media, Search, and a Next.js UI.
- Implemented JWT auth with refresh rotation, HTTP-only cookies, rate limiting, and gateway-level request validation.
- Designed RabbitMQ event pipelines enabling eventual consistency and real-time search indexing.
- Built a scalable Docker-based deployment with internal service discovery and production health checks.
- Added caching layers and optimized DB queries, improving feed load performance significantly.

Education

B.E. Computer Science & Software Engineering   2022 – 2026 (Expected)
Acharya Institute of Technology, Bengaluru