

RAMESH NAIR

Backend Engineer | Distributed Systems | Microservices | System Design | AI Integration

Pune | ramesh200212@gmail.com | [Github](#) | [LeetCode](#) | [Portfolio](#)

EXPERIENCE

Software Development Engineer - 1, Furlenco **Nov 2025 - Present**

- **Communication Platform** · Strategy + Factory · Spring Boot
 - Strategy + Factory pattern for KYC Reminder, KYC Success, Feel-at-Home across Furlenco Rental and UNLMTD verticals
 - eliminated if-else branching
 - **Open/Closed Principle**: new verticals onboard without modifying existing handler code
- **Renewal Reminder & Collection Engine** · Quartz · Parallel Streams
 - **Batch-parallel Quartz** Scheduler designed for **100K+** users in minutes vs hours
 - Per-user fault isolation designed for 99.9% delivery reliability
 - **4–5% increase in renewal collection revenue** through AutoPay vs Non-AutoPay segmentation
 - Paginated batch fetching designed to reduce DB load ~60%
- **CQRS Pipeline & Kafka Throughput** · Kafka · ExecutorService
 - **Reduced read model sync from ~9 minutes → 5 seconds** under load through batch DB claiming and parallel Kafka publishing
 - Scaled Kafka consumer throughput 15× with 3-tier fault tolerance (main → retry → DLQ) and idempotent processing
 - Eliminated a DB connection leak and race condition by splitting the publish pipeline into three clean phases

Founder Cloud Kitchen

Oct 2023 - Oct 2025

- Built and operated an independent cloud kitchen — managed operations, vendor relationships, and full P&L independently

Software Development Engineer- 1, Zivame

Arp 2023 - Sep 2023

- Built frontend photo upload flow for mandatory proof-of-condition on product returns — sole owner from UI to API integration
- Collaborated with senior engineers on minor frontend enhancements, gaining exposure to **production-grade workflows, Agile practices, and frontend-backend integration.**

TECHNICAL SKILLS

Programming & Scripting : Java , Python , SQL

Frameworks & Backend : Spring Boot , Hibernate , REST APIs , Microservices , Kafka

System Design: LLD , Solid Principles , Scalability , Template Method , CQRS , Orchestrator

Databases & Storage: MySQL , Redis

Cloud & DevOps: AWS (EC2, S3, RDS) , Docker , Git

AI & Emerging Tech: AI Agents , Cohere/Groq APIs , LLM Integration

EDUCATION

Backend Specialization , Scaler Academy **Nov 2024 - Present**

Solved **549** coding problems (**DSA + System Design**) with 99.8% accuracy.

B.Tech Mechatronics & Automation **Aug 2018 - Aug 2022**

MIT ADT University Pune (CGPA : 8.3/10)

PROJECTS

Aegon — Distributed One-to-One Chat System [Project Link](#)

- **4-state ACK lifecycle** (CREATED → SENT → DELIVERED → READ) — only the client can assert DELIVERED and READ, crash-safe by design
- **Offline message replay on reconnect** — MySQL as source of truth, zero message loss regardless of crash timing
- **Stateless horizontal scaling** via Redis Pub/Sub channel-per-server routing — TTL-based multi-device presence, no central regis

Stark — Real-Time Typing Indicator [Project Link](#)

- **Distributed typing indicator (WhatsApp/Slack-style)** — WebSocket for persistent connections, Redis Pub/Sub for zero-config cross-server coordination, designed for 150K+ concurrent connections
- **Message deduplication + auto-cleanup** — isTyping state guard collapses rapid bursts; ScheduledExecutorService timer auto-dismisses after 2s idle

E-Commerce Microservices Platform [Project Link](#)

- **5 independent microservices** (Products, Users, Payments, Email, API Gateway) — Kafka events, JWT + RBAC security, 25% response time reduction via Redis caching

My-Redis — In-Memory Key-Value Store [Project Link](#)

- Redis-inspired store from scratch — thread-safe ConcurrentHashMap, pluggable LRU/LFU eviction via Strategy pattern, REST API with full test coverage