ONKAR SABALE

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PROFESSIONAL SUMMARY

Backend Engineer with ~3 years of experience building **scalable, distributed and event-driven backend systems** using **Node.js, TypeScript, Redis, AWS, PostgreSQL and MongoDB**.
Strong experience in **idempotency, concurrency control, distributed caching, and high-throughput third-party API integrations**, particularly in **healthcare** (EHR) system integration using **HL7/FHIR** standards.
Proven ability to design **fault-tolerant, serverless architectures** and optimize backend performance under high concurrency.

SKILLS

Backend & Distributed Systems: Node.js, TypeScript, Express.js, NestJS, REST APIs, WebSocket's, Event-Driven Architecture, Idempotency, Concurrency Control, Distributed Caching

Datastores & Search: Redis, PostgreSQL, MySQL, MongoDB, Elasticsearch

Cloud & Infrastructure (AWS): AWS Lambda, API Gateway, EC2, S3, ElastiCache, RDS, CloudWatch, Kinesis Firehose

Observability & Reliability: Open Telemetry, SigNoz, Prometheus, Grafana, Loki, Structured Logging, Distributed Tracing

DevOps & Tooling: Docker, GitHub Actions (including dispatched workflows), CI/CD Pipelines

AI & Automation (Applied): AI Agents, RAG, LangChain.js (used for observability, SRE automation, ticketing workflows)

WORK EXPERIENCE

Software Engineer | Thinkitive Technologies Pvt. Ltd. (Pune)   May 2024 – Present

- Designed and built a **scalable EHR integration engine** supporting **11+ EHR systems**, including FHIR and non-FHIR platforms
- Implemented **Redis-based idempotency, request deduplication, and distributed locking** to safely handle high-concurrency external API calls
- Built **event-driven workflows** using **RabbitMQ and AWS SQS** for asynchronous processing and system decoupling
- Scaled **WebSocket-based real-time features** using **RabbitMQ-backed pub/sub**, enabling horizontal scaling
- Developed services across **serverless (AWS Lambda + API Gateway)** and **server-based (EC2, Docker)** architectures
- Optimized Lambda deployments by reducing package size from **~230MB to 43MB**, cutting deployment time from **17 min to 2.5 min.**
- Implemented **end-to-end observability** using **Open Telemetry and SigNoz**, improving debugging and reducing MTTR
- Integrated **AWS Kinesis Firehose** for streaming logs and events into analytics and storage pipelines

Backend Developer | The Herbs Magic (Remote)   May 2023 - May 2024

- Built and maintained backend services using **Node.js and Express.js** for an e-commerce and admin platform
- Implemented **Redis caching** and **queue-based background processing** using **BullMQ** to improve performance
- Deployed containerized services using **Docker and Nginx**, with monitoring via **Prometheus and Grafana**
- Automated deployments using **GitHub Actions**, including manual and dispatched workflows

PROJECTS

AI-Driven SRE Automation Agent

Skills: LangChain.js, Open Telemetry, Signoz.

- Built an AI-powered SRE agent to detect backend failures using logs and traces
- Analyzes root causes and automatically generates **deduplicated ClickUp tickets**
- Reduced manual incident triage and improved observability workflows

EHR Integration Engine (Event-Driven, Distributed System)

Skills: Node.js, Serverless, PostgreSQL, Sequelize, Redis, MixPanel, AWS Lambda, Open Telemetery, AWS, CI/CD.

Compliance: HIPPA, SOC-2.

- Improved Deployment Time from **17 min to 2.5 min** by reducing the unzipped lambda package size from around **230 mb to 43 mb** by using the lambda layers.
- **Designed and developed** a scalable integration engine (EHR Bridge) facilitating seamless data exchange between 11 distinct EHR systems, including legacy systems and those not natively supporting FHIR R4 standards.
- Implemented **Redis-based idempotency, request deduplication, and distributed locking** to handle high-concurrency API calls safely.
- Designed **token orchestration logic** ensuring only one external token request per credential set, preventing race conditions and rate-limit failures
- Implemented **caching strategies** based on credential hash signatures (ClientID, scope, etc.) to reuse tokens until expiry
- Instrumented services using **Open Telemetry and SigNoz** for distributed tracing and performance monitoring
- Deployed workloads across **AWS Lambda (serverless)** and **containerized services**, selecting architecture based on workload patterns

Axios Idempotency & Single-Flight Manager (Open Source / NPM) | Link

Skills: Node.js, TypeScript, Redis, Axios.

- Built a reusable Axios plugin providing **idempotency, request deduplication, and single-flight behavior**.
- Supports **in-memory and Redis backends**, enabling safe usage in both single-instance and distributed systems.
- Designed configurable **idempotency key generation** based on HTTP method, path, headers, and request body.
- Prevents duplicate concurrent API calls and significantly reduces third-party rate-limit and throttling issues.

EDUCATION

D Y Patil International University, Pune   2020 – 2024

B.Tech - Computer Science & Engineering | Cyber Security

- Cyber Security Team Member at Google DSC, DYPIU, Successfully executed event's on cyber security in college campus.
- Campus Ambassador for MyCaptain at DYPIU,Akurdi