

# Harshkumar Ramjibhai Baldaniya

Backend Engineer | Scalable Systems | Node.js, TypeScript, Redis, PostgreSQL  
+91 9265707138 | 2023harsh.baldaniya@gmail.com | [GitHub](#) | [LinkedIn](#) | [Portfolio](#)

## EXPERIENCE

### Software Development Engineer

January 2024 - Presents

Educational Initiatives (Ei)

Ahmedabad, Gujarat

**Tech Stack:** Node.js, TypeScript, PostgreSQL, Redis, AWS

- Contributed to backend development of **EdTech platforms** used to manage **school operations, academic sessions, and student assessment workflows** across multiple institutions.
- Designed and built **scalable backend APIs** handling **5K-10K+ daily requests**, optimizing **database queries and business logic** to reduce API response times by **~30%** while ensuring **consistent performance** and minimal service downtime.
- Implemented **Redis-based caching** and **asynchronous job processing (BullMQ)** to efficiently handle **high-frequency data access** and background tasks, significantly improving system scalability and reducing database load during peak usage.
- Developed secure authentication and role-based access control (**JWT, RBAC**) systems, enabling controlled access for multiple user roles such as **admins and coordinators** while maintaining system security and data integrity.
- Automated **academic scheduling and internal data workflows** by building backend-driven processes, reducing manual effort by **~40%** and improving overall operational efficiency across teams.
- Collaborated closely with **frontend (Angular) and DevOps teams** to deliver **production-ready features**, ensuring smooth deployments, system stability, and reliable performance in real-world usage.

### Node.js Developer (Remote)

May 2023 - June 2023

Infoware India

Ahmedabad, Gujarat

- Developed and optimized **RESTful APIs**, improving backend performance by **~30%** and enhancing system responsiveness
- Reduced database query execution time from **800ms to 300ms** through query optimization and efficient data handling
- Supported backend architecture improvements and data synchronization processes across services

## PROJECTS

### Concurrent Booking System (High-Scale Event & Slot Booking)

[GitHub](#) | [Live](#)

**Tech Stack:** Node.js, TypeScript, PostgreSQL, Redis, BullMQ

- Architected and developed a **high-concurrency booking system** for event and slot reservations, handling multiple simultaneous requests while ensuring **data consistency** and reliable system performance
- Implemented **Redis-based distributed locking** and **seat reservation workflows with expiration handling** to prevent double booking and efficiently manage temporary reservations under high traffic
- Leveraged **asynchronous job queues (BullMQ)** along with **transactional operations and retry mechanisms** to handle background processing, ensuring **scalability, fault tolerance**, and system stability
- Designed **idempotent APIs and request validation mechanisms** to safely handle duplicate or retry requests, ensuring consistent booking behavior under concurrent usage

### Secure Query Execution Platform with API Gateway & Rate Limiting

**Tech Stack:** Node.js, TypeScript, PostgreSQL, Redis, Express, JWT, Docker

- Engineered a **secure backend platform** for controlled database query execution with **approval workflows** and **role-based access control (RBAC)**, ensuring safe and authorized data access
- Designed and implemented an **API Gateway layer** along with **Redis-based rate limiting** to manage traffic, improve **scalability**, and prevent system overload
- Built **audit logging and tracking systems** and automated access workflows, enabling **traceability** and reducing DevOps dependency by **~40%**, improving overall operational efficiency

## TECHNICAL SKILLS

- Backend:** Node.js, TypeScript, REST APIs, Distributed Systems, Microservices
- Databases:** PostgreSQL, MySQL, Redis
- Infrastructure:** Docker, AWS (EC2, S3), Nginx
- Frontend (Working Knowledge):** Angular, React, Next.js, Responsive UI Development
- Authentication:** JWT, RBAC
- Tools:** Git, CI/CD, Postman

## EDUCATION

Pandit Deendayal Energy University, Gandhinagar, India | B.Tech in Computer Science and Engineering

Sep 2020 - May 2024