

# Mayur Kukatkar

## Java Backend Engineer

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### PROFILE SUMMARY

Results-driven Java Backend Engineer with 1+ year of experience designing scalable microservices and optimizing database performance for enterprise applications. Delivered 40% API performance improvements through strategic caching implementation and reduced query execution times for million-record datasets. Specialized in Spring Boot 3 architecture, Spring Security, and test-driven development with proven expertise in building robust RESTful APIs and implementing secure authentication systems.

### TECHNICAL EXPERTISE

**Core Backend:** Java 17, Spring Boot 3, Spring MVC, Microservices Architecture, REST API Design, Spring Data JPA

**Data & Persistence:** Oracle 11g, MySQL, PostgreSQL, Hibernate ORM, JPA, Query Optimization, Database Design

**Security & Auth:** Spring Security 6, OAuth2, JWT, Role-Based Access Control (RBAC), Authentication Filters

**DevOps & Cloud:** Docker, Maven, Git, CI/CD Pipelines (GitHub Actions), Linux, AWS (Basic)

**Testing & Quality:** JUnit 5, Mockito, Integration Testing, Postman, SonarQube, TDD Methodology

**Additional Skills:** RESTful API Documentation, Caching Strategies, Design Patterns, Agile/Scrum

### PROFESSIONAL EXPERIENCE

#### Java Backend Engineer

July 2025 – Present

ARDsoft

Nagpur, India

- API Performance Optimization:** Engineered 15+ REST endpoints for Document Management System handling 10,000+ daily requests, implementing caching strategies that reduced average response times from 500ms to 300ms (40% improvement).
- Database Query Optimization:** Refactored 20+ legacy SQL queries and eliminated N+1 query patterns through strategic JPA fetch strategies, reducing average query execution time from 3.2s to 0.8s for million-record datasets.
- Security Architecture:** Designed and implemented centralized security module using Spring Security 6 and JWT-based authentication, enforcing role-based access control across 8 microservices with zero security incidents.
- Microservices Development:** Architected inter-service communication patterns (REST + event-driven) ensuring 99.5% uptime and maintaining data consistency across distributed systems.
- Code Quality & Testing:** Maintained 85% unit test coverage using JUnit 5 and Mockito, enforcing SonarQube quality gates with zero critical bugs in production deployments.
- Technical Collaboration:** Conducted code reviews for 3-member backend team, mentored junior developers on Spring Boot best practices and design patterns.

#### Software Engineer Trainee

Jan 2025 – June 2025

ARDsoft

Nagpur, India

- Backend Development:** Designed and deployed complete backend architecture for internal Employee Management System serving 200+ users, implementing layered architecture (Controller-Service-Repository) with DTO pattern for clean separation of concerns.
- Database Design:** Created normalized database schemas (3NF) with 12+ entity relationships and implemented efficient CRUD operations using Spring Data JPA, reducing data redundancy by 35%.
- API Development & Testing:** Developed 25+ RESTful API endpoints with comprehensive error handling, validated through Postman test suites covering 40+ edge cases before frontend integration.
- Performance Tuning:** Optimized application startup time from 45s to 18s through lazy initialization and dependency injection optimization.

## KEY PROJECTS

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**Smart Task Workforce Management System** [smart-task-workforce-management-sys.vercel.app](https://smart-task-workforce-management-sys.vercel.app) | [github.com/mayurkukatkar](https://github.com/mayurkukatkar)

*Tech Stack:* Java 17, Spring Boot 3, MySQL, Spring Security 6, JWT, React.js, Docker

- Architected scalable Spring Boot backend handling 500+ concurrent users with average response time under 200ms for task assignment and real-time status tracking across 3 user roles (Admin, Manager, Employee).
- Implemented fine-grained RBAC security system with JWT authentication, ensuring data isolation and preventing unauthorized access with custom authorization filters.
- Designed optimized database schema with efficient indexing strategies, enabling sub-100ms query performance for complex task filtering and reporting operations.
- Built RESTful APIs with comprehensive input validation and exception handling, achieving 90% test coverage through JUnit integration tests.

**The Product Shop (E-Commerce Backend)** [thecosmeticsshop-frontend.vercel.app](https://thecosmeticsshop-frontend.vercel.app) | [github.com/mayurkukatkar](https://github.com/mayurkukatkar)

*Tech Stack:* Node.js, Express.js, MongoDB, Mongoose, JWT, Stripe API Integration

- Developed 30+ RESTful API endpoints for product catalog management, shopping cart operations, and order processing serving 1,000+ registered users.
- Designed flexible NoSQL data models using Mongoose schemas to handle varied product attributes, user profiles, and order histories with efficient aggregation pipelines.
- Integrated third-party payment gateway (Stripe) with secure webhook handling for order confirmation and inventory management.
- Implemented caching layer for frequently accessed product data, reducing database queries by 45% and improving catalog load times.

**Business CRM Solution** [business-management-solution.vercel.app](https://business-management-solution.vercel.app) | [github.com/mayurkukatkar](https://github.com/mayurkukatkar)

*Tech Stack:* Next.js 14, PostgreSQL, Prisma ORM, TypeScript, REST API

- Built type-safe backend API routes using Next.js server-side architecture and Prisma ORM, managing customer data, sales pipeline, and analytics for 50+ business users.
- Implemented complex SQL aggregation queries for real-time sales metrics and reporting dashboards, processing 10,000+ transactions with sub-second response times.
- Designed relational database schema with proper normalization and foreign key constraints, ensuring data integrity across customer, product, and order entities.
- Utilized TypeScript for end-to-end type safety across database queries, API responses, and client-side data validation.

## EDUCATION

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**Bachelor of Technology in Information Technology** 2021 – 2025

*St. Vincent Pallotti College of Engineering and Technology, Nagpur*

CGPA: 6.0/10

**Relevant Coursework:** Data Structures & Algorithms, Database Management Systems, Operating Systems, Software Engineering, Object-Oriented Programming, Computer Networks