

# DIVYANSH KARAN

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## Education

### Bachelor of Technology, VIT Bhopal University

Computer Science Engineering, CGPA: 8.82/10

2022-2026

Bhopal, Madhya Pradesh

## Technical Skills

**Backend Development:** Python, Java, C++, Node.js, FastAPI, Express.js, RESTful APIs, GraphQL

**Frontend Technologies:** React.js, Next.js, JavaScript, TypeScript, HTML, CSS, UI/UX principles

**Database Systems:** PostgreSQL, MongoDB, Redis, SQL optimization, database design, indexing strategies

**Development Tools:** Version control (Git, GitHub), Postman, Unit testing (Jest)

**Cloud & DevOps:** AWS (EC2, S3, Lambda, RDS, CloudFormation, API Gateway, SNS/SQS, CloudWatch), Microsoft Azure, Docker, Kubernetes, Linux, NGINX, CI/CD pipelines, Jenkins

**Microservices & Architecture:** Microservices, Event-driven architecture, Domain Driven Design, Message queues, Kafka

**Software Engineering Practices:** Agile methodologies, SDLC, Collaboration tools (Slack, Jira)

## Projects

### ShelfSpace – Personalized Book Discovery Platform

Jan 2025 – Ongoing

NextJS, ExpressJS, FastAPI, TypeScript, PostgreSQL, Prisma, Kafka, Docker, Redis, NGINX

- Collaborated in Agile sprints to develop domain-driven microservices architecture with User, Books, Bookmarks, and Forums services, implementing comprehensive unit testing coverage using Jest for 85%+ code coverage
- Designed advanced User and Book modeling with PostgreSQL and Prisma ORM, implementing ML-driven recommendation algorithms using collaborative filtering and content-based approaches
- Implemented event-driven communication via Kafka for real-time cross-service preference synchronization, ensuring consistent personalization data across distributed systems with message queuing patterns.
- Optimized performance using Redis caching and PostgreSQL query tuning, achieving sub-10s response times for personalized book recommendations through systematic debugging and performance profiling

### EisLager – Multi-Role E-Commerce and Inventory Management Platform

Feb 2025 – Jul 2025

NextJS, ExpressJS, PostgreSQL, Kafka, WebSockets, Docker, Microservices, Event-Driven Architecture

- Engineered full-stack ERP and e-commerce hybrid system supporting 4 user roles (Executive, Manufacturer, Clerk, Patron) with JWT-based authentication and role-based access control (RBAC) following Agile development practices
- Architected event-driven microservices ecosystem with 8 bounded-context services handling inventory, sales, billing, communications, and analytics using Domain-Driven Design principles, CQRS pattern and SAGA pattern
- Integrated real-time WebSocket communications and Kafka streaming for instant stock synchronization and order processing, maintaining code quality through Git version control, unit testing, and systematic debugging practices
- Built advanced analytics pipeline with pre-aggregated metrics and PostgreSQL optimization, enabling real-time sales dashboards and financial reporting for multi-location operations through performance profiling and debugging

### WriteWave – AI-Powered Japanese Learning Platform

Mar 2025 – Ongoing

ReactJS, NodeJS, ExpressJS, PostgreSQL, OpenCV.js, Docker, OCR, PWA, Domain Driven Design

- Built interactive Japanese character learning platform with client-side OCR using OpenCV.js and React.js, achieving recognition for Hiragana, Katakana, and 2000+ Kanji through Agile development sprints and iterative testing
- Developed RESTful microservices backend implementing User, Character, Progress, and Community services with PostgreSQL, supporting many character variations and user progression tracking
- Implemented template-matching algorithms with OpenCV.js for real-time stroke validation and feedback, eliminating server round-trips and enabling offline recognition in Progressive Web App
- Deployed containerized system with Docker following CI/CD best practices, featuring gamification mechanics, real-time stroke analysis, and cross-platform PWA supporting iOS, Android, and desktop browsers

## Achievements & Activities

**Technical Certifications:** Maintained 600+ day consistency streak solving 1500+ DSA problems on LeetCode and GeeksForGeeks (Global Rank 672), demonstrating strong algorithmic problem-solving and debugging skills.

**Database & SQL Proficiency:** Completed LeetCode SQL 50 challenge and solved 50 advanced database problems, showcasing expertise in query design and query optimization

**Leadership & Collaboration:** Coordinated TCS on-campus recruitment drives for 200+ students, collaborating with HR teams and managing end-to-end logistics, candidate communication, and interview scheduling

**Competitive Programming Excellence:** Secured 1st place in DSA Tussle competition at AdViTya 2024 among 150+ participants, demonstrating advanced data structures, algorithms, and time-complexity optimization skills