# DIVYANSH KARAN

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## Education

**Bachelor of Technology, Vellore Institute of Technology**　　　　　　　　　**Aug 2022 – May 2026**
*Computer Science Engineering; CGPA: 8.78/10*　　　　　　　　　　　　　　　　*Bhopal, Madhya Pradesh*

## Technical Skills

**Programming Languages:** Python, Java, C++, JavaScript, TypeScript, SQL, Go
**Backend Development:** Node.js, Express.js, FastAPI, Django, REST APIs, GraphQL, WebSockets, gRPC
**Frontend Development:** React.js, Next.js, HTML5, CSS3, Tailwind CSS, Redux
**Databases:** PostgreSQL, MongoDB, Redis, MySQL, Elasticsearch, Prisma ORM
**Cloud Platforms (AWS):** EC2, S3, Lambda, RDS, API Gateway, SNS, SQS, CloudWatch, DynamoDB
**DevOps & Tools:** Docker, Kubernetes, Terraform, Jenkins, GitHub Actions, CI/CD, Git, Linux, NGINX
**System Design:** Microservices, REST API Design, Event-Driven Architecture, Apache Kafka, Load Balancing, Caching, Database Sharding

## Experience

**Closed Networks Pvt Ltd – Backend Engineer Intern**　　　　　　　　　　　**Aug 2024 – Jan 2025**

- Architected microservices-based hospital appointment system using Node.js and Express.js, designing event-driven architecture with Apache Kafka for asynchronous inter-service communication and message streaming
- Engineered authentication and authorization system implementing JWT tokens and role-based access control (RBAC), securing REST API endpoints for 3 user roles (patients, doctors, administrators) handling 500+ daily requests
- Integrated Apache Kafka event streaming for real-time appointment notifications and status synchronization across distributed services, achieving 99.5% message delivery reliability and 40% reduction in service coupling

## Projects

**WriteWave – AI-Powered Japanese Language Learning Platform**　　　　　　**Mar 2025 – Present**
*React.js, Node.js, Express.js, PostgreSQL, OpenCV.js, Docker, OCR, Progressive Web App (PWA)*

- Built interactive language learning app using React.js with client-side image processing, implementing OCR for 2,000+ Japanese characters (Hiragana, Katakana, Kanji) using OpenCV.js
- Developed RESTful API backend with Node.js and Express.js, designing normalized PostgreSQL schema for user management, progress tracking, and community features supporting 10,000+ records
- Implemented computer vision algorithms for real-time handwriting recognition, reducing server load by 100% through client-side JavaScript processing with 95% recognition accuracy
- Deployed PWA with Docker and CI/CD pipeline using GitHub Actions, enabling offline functionality and cross-platform support for iOS, Android, and desktop with 50% faster load times

**EisLager – Multi-Role E-Commerce and Inventory Management Platform**　　**Feb 2025 – Jul 2025**
*Next.js, Express.js, PostgreSQL, Apache Kafka, WebSockets, Docker, Microservices Architecture*

- Developed full-stack e-commerce platform with Node.js and React.js supporting 4 user roles, implementing JWT authentication, RBAC, and secure REST API endpoints handling 500+ daily transactions
- Built 8 Docker-containerized microservices using Domain-Driven Design (DDD) and CQRS pattern for inventory, orders, billing, and analytics, reducing deployment time by 70%
- Integrated WebSocket real-time notifications and Apache Kafka event streaming, enabling instant inventory sync and order tracking across 5+ warehouse locations with zero data loss
- Created React.js analytics dashboard with PostgreSQL aggregation queries, delivering real-time sales metrics and business intelligence reports with sub-second query response times

## Achievements & Activities

**ICPC Asia Regional Finalist 2025:** Selected for International Collegiate Programming Contest (ICPC) Regional, demonstrating expertise in algorithms, data structures, and competitive programming

**Competitive Programming:** Won 1st place in DSA competition at AdVITya 2024 (150+ participants), demonstrating proficiency in algorithm optimization and time complexity analysis

**LeetCode & GeeksForGeeks:** Solved 1,500+ problems (Global Rank 672 on GFG) covering Binary Search, Graph Traversal (BFS/DFS), Dynamic Programming, and Segment Trees with 600+ day streak

**Leadership:** Coordinated TCS campus recruitment for 200+ students, managing HR communication, interview scheduling, and end-to-end logistics using project management best practices