

DIVYANSH KARAN

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Education

Bachelor of Technology, Vellore Institute of Technology

Computer Science Engineering; CGPA: 8.78/10

Aug 2022 – May 2026

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

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

ShelfSpace – Personalized Book Discovery Platform

Jan 2025 – Present

Next.js, Express.js, FastAPI, TypeScript, PostgreSQL, Prisma ORM, Apache Kafka, Docker, Redis, NGINX

- Engineered scalable microservices backend using Node.js and Python, deploying 4 services (User, Books, Bookmarks, Forums) with 85% Jest test coverage following Agile and CI/CD practices
- Designed RESTful APIs and PostgreSQL database schema with Prisma ORM, building ML recommendation engine using collaborative filtering that increased user engagement by 40%
- Architected event-driven system with Apache Kafka for real-time messaging across distributed microservices, achieving 99.9% message delivery reliability and reduced service coupling
- Optimized API performance using Redis caching and SQL query tuning, reducing response latency by 60% to sub-100ms for 1000+ concurrent users

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