

JAY HEMNANI

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Gujarat, India (Open to Relocate)

Education

Pandit Deendayal Energy University (PDEU)

2018 – 2022 | Gandhinagar, India

B.Tech in Computer Engineering | GPA: 8.7/10

- **Coursework:** Operating Systems, Computer Networks, Database Systems, Software Development.

Technical Skills

Languages: Python, Java, Go, JavaScript/TypeScript, C++, SQL

Backend: Node.js, Express, FastAPI, REST APIs, GraphQL, gRPC, Microservices Architecture

Distributed Systems: Apache Kafka, Redis, Message Queues, Event-Driven Architecture, Load Balancing

Databases: PostgreSQL, MySQL, MongoDB, Redis, TimescaleDB, Database Design & Indexing

Cloud & DevOps: AWS (EC2, S3, Lambda, ECS), Azure, Docker, Kubernetes, GitHub Actions, CI/CD

Tools: Git, Linux, Nginx, JWT/OAuth, API Gateway, Prometheus, Rate Limiting

Experience

Data Analyst, *Elite Hotel Group*

Summer 2025 | San Jose, CA

- Engineered **automated data pipelines** using Python and SQL, reducing manual processing by **40%** and improving system reliability across multi-property workflows.
- Built **REST APIs** for internal dashboards integrating with Tableau/Power BI for real-time KPI tracking.

Technical Consultant,

2022 – 2024 | Remote

- Provided **backend development and infrastructure consulting** for small businesses, building APIs, deployment pipelines, and automation solutions.

AI/ML Intern, *Amnex*

Jan – May 2022 | Gujarat, India

- Built **fraud detection backend** using Python with REST APIs for model serving, achieving **94% precision** on transaction classification.
- Developed **automated reporting services** with scheduled jobs and database integrations for operational analytics.

Software Engineering Intern, *Cactus Creatives*

May – Nov 2019 | Gujarat, India

- Built **cloud-native communication platform** for first responders using microservices architecture on Azure with REST APIs for real-time dispatch.
- Configured **CI/CD pipelines** with automated testing and deployment workflows, reducing deployment time by **60%**.

Projects

Kayak — Distributed Travel Platform | *Node.js, MySQL, MongoDB, Redis, Kafka, Docker*

- Engineered **3-tier distributed architecture** with API Gateway handling JWT authentication, rate limiting, and request routing to independent microservices.
- Designed **horizontal scaling strategy** with independent User, Search, and Booking services for fault isolation and independent deployment.
- Achieved **sub-100ms API latency** via Redis caching; implemented **Kafka event streaming** for real-time inventory sync across services.

Airbnb — Cloud-Native Booking Platform | *React, Node.js, MongoDB, Kafka, Docker, K8s*

- Built **full-stack booking platform** with React frontend and Node.js microservices, deployed on Kubernetes with auto-scaling and health monitoring.
- Implemented **Kafka-based event bus** for asynchronous communication between booking, search, and notification services.
- Integrated **AI-powered travel planning** using LangChain agents for personalized recommendations within the booking workflow.

CAG Deep Research — Multi-Agent System | *Python, LangGraph, FastAPI, PostgreSQL*

- Architected **multi-agent orchestration system** with LangGraph, coordinating 5+ specialized AI agents to autonomously synthesize research reports.
- Built **FastAPI backend** with PostgreSQL persistence, handling concurrent agent workflows with state management and retry logic.