

# 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:** Database Systems, Big Data Analytics, Operating Systems, Computer Networks.

## Technical Skills

**Programming:** Python, SQL, Java, Go, JavaScript/TypeScript

**Data Engineering:** Apache Kafka, Apache Airflow, PySpark, Pandas, ETL/ELT Pipelines, dbt, Data Modeling

**Databases:** PostgreSQL, MySQL, MongoDB, TimescaleDB, Redis, Data Warehousing

**Cloud & Infrastructure:** AWS (S3, EC2, Lambda, Glue), GCP (BigQuery), Docker, Kubernetes

**Streaming & Processing:** Kafka Streams, Spark Streaming, Batch Processing, Event-Driven Architecture

**Tools:** Tableau, Power BI, Streamlit, Dash, Git, GitHub Actions (CI/CD), Prometheus

## Experience

**Data Analyst, *Elite Hotel Group***

Summer 2025 | San Jose, CA

- Engineered **automated ETL pipelines** using SQL and Python, reducing manual data preparation by **40%** and improving data consistency across multi-property analytics workflows.
- Built **interactive dashboards** in Tableau/Power BI for occupancy, revenue, and KPI tracking; developed **demand forecasting models** using time-series analysis for dynamic pricing.

**Technical Consultant,**

2022 – 2024 | Remote

- Provided **data analytics and pipeline consulting** for small businesses, building reporting automation, ETL workflows, and data infrastructure solutions.

**AI/ML Intern, *Amnex***

Jan – May 2022 | Gujarat, India

- Built **fraud detection pipeline** using ensemble ML (Random Forest, XGBoost) with SMOTE for class imbalance, achieving **94% precision** on transaction data.
- Developed **automated analytics dashboards** with statistical models for operational reporting, streamlining KPI calculations and anomaly detection workflows.

**Software Engineering Intern, *Cactus Creatives***

May – Nov 2019 | Gujarat, India

- Built **cloud-native backend services** on Azure using microservices architecture; configured **CI/CD pipelines** reducing deployment time by **60%**.

## Projects

**Stock Data Platform — Batch + Streaming Analytics** | *Python, Kafka, Airflow, TimescaleDB, Dash*

- Built **distributed streaming architecture** using Kafka topics for real-time tick ingestion, implementing idempotent writes and producer buffering for fault-tolerant data capture.
- Orchestrated **Airflow DAGs** for batch ETL pipelines handling scheduled ingests, incremental backfills, and data validation with reproducible lineage tracking.
- Designed **TimescaleDB hypertables** with star schema (FactPrices + dimensions) for time-series analytics, powering Dash dashboards with rolling indicators and intraday heatmaps.

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

- Engineered **3-tier distributed architecture** with API Gateway (JWT auth, rate limiting) routing to independent microservices for horizontal scaling.
- Achieved **sub-100ms search latency** via Redis caching layer; implemented **Kafka event streaming** for real-time inventory synchronization across services.
- Designed **hybrid storage layer** using MySQL for OLTP bookings and MongoDB for analytics/logging with optimized indexing strategies.

**Website Watcher — Production Web Archiver** | *Python, Flask, SQLite, Prometheus, Docker*

- Built **automated monitoring pipeline** tracking 100+ sites every 2 hours with change detection, full-text search across 50K+ snapshots, and Prometheus metrics.
- Deployed with **Docker Compose** for zero-downtime operation, implementing health checks, log rotation, and automated alerting on content changes.