

JAY HEMNANI

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San Jose, CA

Education

San José State University

Jan 2025 – Present | San Jose, CA

M.S. in Applied Data Intelligence

- **Coursework:** Machine Learning, Deep Learning, Data Visualization, Distributed Systems, Big Data Analytics.

Pandit Deendayal Energy University (PDEU)

2018 – 2022 | Gandhinagar, India

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

- **Coursework:** Computer Vision, Natural Language Processing, Big Data Analytics, Neural Networks.

Technical Skills

Programming: Python, SQL, Java, C++, JavaScript

ML/AI Frameworks: TensorFlow, PyTorch, Scikit-learn, Keras, Hugging Face Transformers

ML Engineering: FAISS, LangChain, Vector Databases, RAG Pipelines, Model Serving, Feature Engineering

Data Processing: Pandas, NumPy, PySpark, Apache Kafka, Airflow

Cloud & MLOps: AWS (SageMaker, Lambda, S3), Docker, Kubernetes, GitHub Actions, MLflow

Databases: PostgreSQL, MongoDB, Redis, Pinecone, ChromaDB

Experience

Data Analyst, Elite Hotel Group

Summer 2025 | San Jose, CA

- Developed **demand forecasting models** using time-series analysis and regression techniques, improving booking prediction accuracy for dynamic pricing optimization.
- Built **automated ML pipelines** for KPI prediction and anomaly detection across multi-property analytics workflows.

Independent Technical Consultant,

2022 – 2024 | Remote

- Provided **ML and data analytics consulting** for small businesses, building predictive models and automation solutions.

AI/ML Intern, Amnex

Jan – May 2022 | Gujarat, India

- Built **credit fraud detection system** using ensemble ML (Random Forest, XGBoost) with SMOTE for class imbalance, achieving **94% precision** on imbalanced transaction data.
- Developed **statistical models** for operational reporting, automating anomaly detection and KPI forecasting pipelines.

Software Engineering Intern, Cactus Creatives

May – Nov 2019 | Gujarat, India

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

Projects

BarcaBrain — Football Intelligence Platform | Python, FAISS, LangChain, Streamlit

- Designed **vector embedding pipeline** with feature engineering on match events, generating dense embeddings for 10,000+ players using custom feature extraction.
- Implemented **FAISS k-NN index** for semantic similarity search achieving **<100ms latency** with hybrid filtering for role/league constraints.
- Built **interactive ML-powered UI** displaying player clusters, similarity scores, and attribute comparisons for recruitment analysis.

Kayak — AI-Powered Travel Platform | Node.js, Python, LangChain, Redis, Kafka

- Built **AI recommendation service** using LangChain agents for personalized travel deals based on user preferences and search history.
- Implemented **RAG pipeline** for context-aware recommendations, integrating with booking workflows for real-time inference.
- Achieved **sub-100ms inference latency** via Redis caching and optimized prompt engineering.

Stock Data Platform — ML Analytics | Python, Kafka, Airflow, TimescaleDB

- Built **feature engineering pipelines** for financial indicators (SMA, EMA, RSI) with reproducible data lineage.
- Designed **real-time streaming architecture** using Kafka for tick data ingestion powering ML model inference.