

# DHRUVISH PAREKH

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## EDUCATION

**Stevens Institute of Technology** – Hoboken, New Jersey, USA  
*Master of Science in Computer Science | GPA: 3.75/4*

Sept 2024 – Expected: May 2026

**A.D Patel Institute of Technology** – Anand, Gujarat, India  
*Bachelor of Engineering in Information Technology | GPA: 8.61/10*

Aug 2020 – May 2024

## TECHNICAL SKILLS

**Languages:** C++17, Python, TypeScript/JavaScript, SQL, Bash, Java  
**Backend & Distributed:** FastAPI, Node.js, Celery, Kafka, WebSockets  
**Data Stores:** PostgreSQL, Redis, DuckDB, MongoDB  
**AI/LLM:** LangChain, LangGraph, PyTorch, Tensorflow  
**Cloud & DevOps:** Docker, AWS (EC2, S3, CodeDeploy), GitHub Actions, CloudWatch; k6/Artillery

## PROJECTS

**DataSense – Agentic CSV Q&A Platform** [GitHub](#)

July 2025 – Present

- Shipped GenAI service (FastAPI + S3) with APIs for retrieval and evaluation on large document sets.
- Redis ((file\_id, question)) + in-memory DuckDB removed re-compute and brought duplicate Celery jobs to **0**.
- Built 4-path multi-tenant S3 layout with sharding; stored 2 plots + 1 stats JSON per upload for single-GET retrieval.
- Load-tested with **k6** to 17,900 req in ~3 min (~**98.5 req/s**), 0% errors; p95 22.81 ms on EC2.

**Market Data Service** [GitHub](#)

May 2025 – June 2025

- Built an **on-demand polling system** with **FastAPI** to fetch stock prices every 5 seconds when a user initiates tracking.
- Stored raw price snapshots in **PostgreSQL** and cached latest prices in **Redis**, reducing repeated DB reads by **80%**.
- Produced **10,000+ Kafka events/day** to decouple ingestion and enable **asynchronous processing**.
- Calculated 1-minute **moving averages** from raw prices and inserted into a **separate table** for trend analysis.
- Indexed **time-series schema** in PostgreSQL for efficient range queries over raw and averaged data.
- Deployed containerized service on **AWS EC2** for integration and load testing.

**LobbyBase – Real-Time Multiplayer Lobby System** [GitHub](#) | [Demo](#)

Jan 2025 – Feb 2025

- Shipped a **React** real-time UI (**WebSocket** + **Node.js**) enabling smooth chat and player movement.
- Tracked session and player state in Redis using **key-based lookups**, reducing database reads by **90%**.
- Routed messages through custom event handlers **using filtered emit logic**, reducing payload size by 70%.
- Simulated **600 users** and 40 messages/sec using Artillery, achieving **100%** message delivery.
- Generated room codes using UUID and maintained them in memory, enabling isolated sessions and reconnects.

**Additional:** Won 2nd Place (of 1615), Hack the League Chapter 2 – Built minutes-of-meeting tool using Cohere

## RELEVANT EXPERIENCE

**Neuvo Daksha Technologies Pvt. Ltd.**, Software Developer – Remote, India

Dec 2023 – April 2024

- Developed **REST backend** using FastAPI to generate try-on previews, handling 200+ test requests.
- Integrated OpenPose and body-measurement modules, improving overlay accuracy by 5% (IOU).
- Added **3-stage preprocessing** for **stitched/unstitched** inputs, raising input success rate from 82% to **97%**.
- Ran 500+ image-text test cases with scripts, detecting 6% edge-case failures.
- Containerized backend with Docker and set up CI/CD via **GitHub Actions**, reducing setup time from 30m to **5m**.
- Documented APIs and pipeline in Markdown, cutting onboarding time by **50%**.

**Tatvasoft**, Software Developer Intern – Remote, India

July 2023 – Aug 2023

- Architected a **serverless backend** with **AWS S3** and **DynamoDB**, achieving <10ms access for 1000+ images.
- Automated CI/CD with GitHub Actions and CodeDeploy, reducing deployment time by 60% using blue-green strategy.
- Optimized **GraphQL queries** with caching and analysis, lowering latency from 870ms to 200ms.
- Integrated **Stripe** for secure payments, processing 10,000+ monthly transactions.