

Het Patel

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EDUCATION

Pandit Deendayal Energy University

B.Tech in Information and Communication Technology,
Minor in Computational Data Science

8.8 CGPA

Aug 2022 – May 2026

PROJECTS

Prototerra - Full-Stack E-Commerce Platform

- Engineered a scalable full-stack e-commerce architecture (Next.js, Node.js, MongoDB) and optimized data fetching with compound indexing, successfully supporting sustained loads of 1,000 concurrent users validated via k6 stress testing.
- Slashed animation asset payloads by 94% (from 140MB to <8MB) by engineering a custom HTML5 Canvas rendering engine, replacing 160 heavy DOM elements to achieve seamless 60 FPS across a 300vh interactive scroll.
- Architected a frictionless auth flow with NextAuth.js for Google OAuth and secure JWT session management, bridging secure backend access with rapid e-commerce checkout.

Stock Market Forecasting using LSTM, BiLSTM & VMD

- Ingested multi-year 1-minute bars, resampled to 5-minute OHLCV, and trained with a 24-bar lookback, 70/15/15 split, EarlyStopping + best-checkpoint.
- Engineered indicators (SMA/EMA/WMA/KAMA, Bollinger, RSI, MACD, ADX, ATR, OBV, lags) and kept only high-correlation predictors ($|\rho| \geq 0.85$ with close).
- Benchmarked univariate & multivariate LSTM / BiLSTM against VMD-BiLSTM (K=4 IMFs); the hybrid reconstructed price and outperformed all baselines on R^2 / MAE / RMSE / MAPE.

EXPERIENCE

Trionic Technologies LLP

Software Developer Intern (AI/ML)

Jan 2026 – Present

Ahmedabad, India

- Designed and shipped an intraday agentic NSE trading system where LLMs only propose trades; schema validation, sanity checks, and a deterministic RiskGovernor approve / reject / halt before any order reaches Zerodha via Kite MCP, with DRY.RUN / PAPER / LIVE gates.
- Built the news $\rightarrow$ ticker $\rightarrow$ NewsRank pipeline (NSE/BSE + RSS + Yahoo): nil-filing filters, taxonomy scoring with recency decay, and MIS limits-backed by 15+ live risk controls.
- Added an offline safeguards backtest (RiskGovernor + Yahoo OHLC) reporting win rate and wallet return (e.g. RELIANCE ~37% win rate, ~+6% return), plus a hybrid YAML+Python harness with 67+ pytest cases across risk, API, and trading workflows.

ACHIEVEMENTS & COMPETITIVE PROGRAMMING

- Meta Hacker Cup (2025)** – Global Rank **752** out of **24k+** participants [Round 1], Global Rank **1288** out of **5k+** participants [Round 2]. 
 - TCS CodeVita Season XIII** – Global Rank **8524** out of **146k+** participants. 
 - NPTEL Course** – Completed NPTEL Online Certification in "Understanding Incubation and Entrepreneurship" with a score of 70%. 
 - LeetCode – **HetPatel1177** 
 - Codeforces – **hetpatel12** 
- Highest Rating: **1722** Top 12.28%
Highest Rating: **1375**

TECHNICAL SKILLS

- Languages:** C++, Python, JavaScript,  MySQL, NoSQL (MongoDB), HTML5, CSS3
- Frameworks & Libraries:** Next.js, React.js, JWT, TailwindCSS
- Tools & Platforms:** Git, VS Code, Jupyter Notebook, Google Colab
- Concepts:** Data Structures & Algorithms, OOP, AI & ML Fundamentals