



SUMMARY

I build and run **EdgeTest**, a backtesting, market-data and paper-trading platform for NSE equities and index options, from data pipeline and cost models to engine, API and UI. My focus is backtests a trader can trust: costs checked against a real contract note, margin against the broker's calculator, runs reproducible byte for byte, strategies tested on sealed out-of-sample data. B.Tech, Computer Software Engineering (2024); earlier 3 years in performance marketing.

30.6M

F&O rows, daily,
2016 to Oct 2026

195M

1-minute bars
(equity + options)

3,519

listed companies,
376 ETFs/REITs/InvITs

62 · 24

indicators · options
templates, 11 strike
modes

~10 s

10-yr, 497-stock
backtest end to end

1,700+

tests, mutation-
checked

EXPERIENCE

Technical Lead, **EdgeTest (Imperial Quant LLP)**, Surat

Jun 2026 to Present

Own architecture, data, engines, infra and delivery. Plain-English strategy in, NSE backtest out. 72-table production database, analysis only, no order routing.

- **Equity engine.** Real cash-and-holdings portfolio, next-open fills, gap-through stops, trailing stops, SIP/lump sum (XIRR), signal exits, AND/OR rules over 62 indicators, 36 point-in-time fundamental metrics (39 filterable), ranked baskets (percentile-ranked factors, weekly to quarterly), 65 universes plus 22 industries, 3-year to 10-year and custom windows.
- **Options engine, 10 years of exchange data.** 24 templates plus up to 10 custom legs, 11 strike-selection modes (delta, premium, straddle width, synthetic future), calendars, diagonals, futures legs, per-leg stop/target/trail, re-entry, profit lock, break-even trail, margin-gated entries. Checked against 16 strategies' published payoff identities (16/16).
- **Minute resolution.** Daily/Minute switch on index options (range breakout, move and signal triggers, SuperTrend-flip exit, measured bid-ask fills) and a 1-minute equity portal (short selling, risk-per-trade sizing, daily loss stop). 1-year minute run cut 188 s to 25.5 s, byte-identical on 12 setups.
- **Costs and margin measured, not assumed.** Date-aware STT, exchange, SEBI, stamp, GST, DP and exercise-STT tables reproduce a real broker contract note to the paisa (Rs 702.46). Margin gate was 11 to 15x too light against the broker's SPAN calculator; rebuilt within ~7%. Era-correct lot sizes (21 circular boundaries) and expiry calendars (63 phantom expiries excluded).
- **Portfolios, tracking, reporting.** Up to 5 equity and options strategies co-simulated on one cash and margin pool (fuzzed on 2,000 random portfolios); daily signal tracking with an 08:15 IST email; report with drawdown anatomy, exit mix, luck test (10,000 reshuffles) and a run fingerprint that makes any result replayable.
- **Data and infra.** Nightly VPS pollers with "not published yet" handling, day-level gap detection, corporate-action adjustment behind a human approval gate, TimescaleDB re-chunking (planning 12.8x faster), Redis price cache (33.6 s to 10.6 s), Celery, nginx, Cloudflare, encrypted off-site backups with restore drills, Sentry, CI.
- **Public market pages (infra I built and run):** Market Today (21 live cards: breadth, VIX, sector P/E, who moved the Nifty, FII/DII gross, delivery-based "bought to hold", streaks), Options Today (17 cards on 5 indices: max pain, PCR vs its year, OI walls, rollover, skew, straddle decay, probability of profit), ~210 F&O stock pages (21 cards: implied vs realized vol, balance sheet, cash flow, ownership, sector rank), ETF/REIT/InvIT pages, IPO Watch, Corporate Actions, [Bulk & Block Deals](#), [AI Screener](#), and 13 explainers. One shared snapshot across workers so no two devices disagree.
- **AI layer.** LLM-powered strategy parser and screener with tool-use validation, prompt caching and a daily spend gate.

Performance Marketer, Designer & Web Developer, **DPG Media**, Surat

2024 to Present

- 63 Meta campaigns for 12+ brands (2.4M+ impressions, 878 leads, best CPL Rs 12 to 16, peak ROAS 14.4x). Built dpgmedia.in solo.

PROJECTS

- **EdgeTest** (above) · **Coaching ERP:** role-based admin, faculty and student dashboards, React + PostgreSQL, 847+ students · **DPG Media** and **Interior designer portfolio** · more at yasharya.in

LIVE PAPER ALGO TRADING (PRIVATE DESK, SINCE 17 MAY 2026)

Four algorithms paper-traded on a private EdgeTest dashboard with live P&L, itemised charges and a forward record. Signals are logged before outcomes exist and never rewritten. Figures below are net of all charges, as of the 9 Oct 2026 close.

BOOK	RESULT
Equity momentum book (Rs 5L)	+Rs 45,703 (+9.1%) since inception; 10 holdings; ledger reconciled to the original to the paisa.
Index options, defined-risk (NIFTY, BANKNIFTY, FINNIFTY)	+Rs 43,446 over 19 trades, 16 winners (84%); last settled 5 Oct.
Equity swing breakout (Rs 10L)	-Rs 57,689 over 2 trades, both stopped out. Low-frequency by design (about 5 signals a year); sample too small to judge.
Intraday index options, short premium (5 lots)	+Rs 28,511 over 7 sessions (30 Sep to 9 Oct), all 7 profitable. Too short a record to call an edge.

QUANTITATIVE RESEARCH: WHAT I TESTED, WHAT SURVIVED

Pre-registered in git before data was opened, final period opened once, judged net of measured spreads and statutory costs at 10 NIFTY lots. Most ideas fail; I report that.

TRADER'S QUESTION	WHAT THE DATA SAID
My 09:20 short ATM straddle with a per-leg stop: is the entry time the edge?	No. 257 of 281 entry minutes are profitable. The stop is the strategy, and its best multiple flips: tight wins in choppy 2024, no-stop wins in trending 2025. Sealed 2025: +0.5 bp/day, t 0.56, not significant.
Does a trend-flip system (TrendShift, Pine) work on NIFTY futures, stocks, options, 8 bar sizes?	No intraday. ~1 bp gross vs 22 bp stock costs; best 2024 setting lost Rs 92K at 10 lots in 2025. On daily bars the timing is real (100th percentile vs shuffles, Sharpe 1.37 vs 1.13, drawdown -23% vs -57%) but it only holds ~54% of the time, so it trails buy-and-hold on return.
Kernel-band Heikin Ashi stop-and-reverse; Optuna S/R breakout on 1-min futures	No. 0 of 864 stock settings positive; best futures setting Deflated Sharpe 0.35; Optuna winner (Sharpe 2.1 in 2024) lost 1.4 bp/day sealed.
Can I trade the short swings in option premiums (1 to 60 min)?	No. 72-80% of a 1-min option move is delta times the index; no pattern in swings. One apparent mean-reversion edge vanished when traded as a straddle: it was a hedging artifact.
Last-30-minute index momentum; afternoon option drift (India literature)	No. 1 to 2 bp of effect against 3 to 90 bp of cost. The US result does not transfer.
Monthly NIFTY put-write, turn-of-month, 200-day filter, PEAD	Put-write earned 5.4%/yr, below cash; March 2020 wiped out 125 months of premium. 200-day trend halves drawdown but costs ~4%/yr: a risk overlay, not a return source. PEAD works pre-cost, not long-only after costs.
Does momentum really earn overnight?	Yes in cash (+9 bp/day), but futures open ~20 bp above the cash auction, so the same premium is -0.9 bp/day in futures. Mostly an opening-auction effect, not harvestable.
Can I predict a big 5 to 10 min move (not its direction)?	Yes. AUC 0.76 vs 0.50 clock-only on NIFTY futures and spot out of sample, top-decile lift 3.3 to 3.6x, driven by recent range and volatility. A straddle leg-out attempt to monetise it lost, so it is not yet a trade.

TECHNICAL SKILLS

Quant & trading: backtest engine design, fill and slippage models, Black-Scholes, implied vol, Greeks, IV rank, SPAN margin, NSE cost stack, expiry and lot regimes, corporate actions, point-in-time fundamentals, look-ahead control, PBO, Deflated Sharpe, shuffle controls

Stack: Python (pandas, numpy, numba, pytest), SQL, PostgreSQL, TimescaleDB, Redis, Celery, FastAPI, TypeScript, React, Next.js, Docker, nginx, Linux, Cloudflare, GitHub Actions, Sentry, LLM tool-use APIs

Practice: mutation testing, independent re-implementation checks, byte-identical regression before deploys

EDUCATION

B.Tech, Computer Software Engineering, PDEU, Ahmedabad Completed 2024