AI Deep Analysis — 718 Trades, 180 Days

Model: claude-opus-4-6 | **Tokens:** 1,263 in / 2,940 out | **Cost:** $0.2394 **Date:** 2026-02-17

Narrative

Over 180 days and 718 closed trades, the strategy has generated $39,255 in paper P&L with a 91.6% win rate and 53.56% average ROI. The last 30 days show acceleration: 158 trades at 75.26% avg ROI, suggesting either improved trade selection or a favorable market regime (likely the latter, given VIX and trend data). The strategy is overwhelmingly short-dated (94.4% of trades are 0-7 DTE), heavily concentrated on Monday entries (72.4% of trades), and operates almost exclusively in normal-to-low volatility environments. This creates a narrow but profitable operating envelope — one that could break down sharply during regime transitions.

Several dimensional patterns are striking and internally consistent: low VIX (100% win, 95.65% ROI), uptrend conditions (99% win, 96.00% ROI), and the 15-20% delta bucket (100% win, 99.80% ROI) all point to the same conclusion — the strategy thrives when selling puts in calm, trending markets at moderate deltas. Conversely, the data reveals clear danger zones: the 25%+ delta bucket (70% win, 5.34% ROI), extreme vol regime (56% win, 0% ROI), and downtrend conditions (88% win, 2.07% ROI) are destroying value. The 14-21 DTE bucket at 25% win rate on 4 trades is a red flag, though the sample is tiny. The critical question is whether the strategy is actively avoiding these danger zones or stumbling into them — and whether the recent 30-day outperformance reflects skill improvement or simply a benign market window.

Insights

#1 RISK: 25%+ delta bucket is a value destroyer — cut or restructure

The 25%+ delta bucket has 33 trades with only 70% win rate and 5.34% avg ROI. At 70% win rate on naked puts, the losses on the 30% of losers are nearly wiping out all premium collected. Compare this to the 15-20% delta sweet spot (100% win, 99.80% ROI) and 10-15% (93% win, 98.74% ROI). The mechanism is clear: higher delta means closer to the money, meaning less margin of safety. With 0-7 DTE dominance, there's no time for recovery if the underlying moves against you. Recommend hard-capping delta at 20% or implementing a sliding scale where higher deltas require longer DTE to allow mean reversion.

Related patterns: delta_bucket, dte_bucket

#2 RISK: Extreme vol regime trades should be halted entirely

The 16 trades in extreme vol have a 56% win rate and 0% ROI. A 56% win rate on naked puts means the strategy is essentially coin-flipping in these conditions, and the 0% ROI means the winners barely offset the losers. This is consistent with the elevated VIX bucket (88% win, 38.80% ROI) showing degradation versus low VIX (100% win, 95.65% ROI). The strategy should implement a hard VIX ceiling — likely around 25 — above which no new positions are opened. The premium looks attractive in high vol, but the tail risk is asymmetric and the data confirms it's not being compensated.

Related patterns: vol_regime, vix_regime

#2 RECOMMEND: Composite filter — uptrend + low VIX + 10-20% delta = highest edge

The three strongest individual signals are: uptrend (99% win, 96% ROI), low VIX (100% win, 95.65% ROI), and 10-20% delta (93-100% win, 98-99% ROI). When these conditions align, the strategy should increase position sizing or allocation. Conversely, when none of these conditions are met (downtrend + elevated VIX + high delta), the strategy should reduce or halt new entries. This creates a simple regime-aware throttle: count how many of the three favorable conditions are present (0-3) and scale position count accordingly. Even a crude version of this would likely improve risk-adjusted returns significantly by avoiding the 2-5% ROI danger zones.

Related patterns: trend_direction, vix_regime, delta_bucket

#3 RECOMMEND: Shift delta targeting to the 10-20% sweet spot

The 10-15% delta bucket (93% win, 98.74% ROI, 15 trades) and 15-20% bucket (100% win, 99.80% ROI, 17 trades) dramatically outperform both the 0-10% bucket (80% win, 81.39% ROI) and the 25%+ bucket (70% win, 5.34% ROI). The 0-10% bucket's lower win rate is counterintuitive — these are far OTM puts that should expire worthless more often. This likely reflects that the very low premium collected (near the $0.30 floor) means even small adverse moves trigger losses relative to the tiny credit received, or that bid-ask spreads eat into returns. Target the 10-20% delta range explicitly as the primary operating zone.

Related patterns: delta_bucket

#3 RISK: Max drawdown of $8,125 is 20.7% of total P&L — tail risk is real

The $8,125 max drawdown against $39,256 total P&L means a single bad sequence consumed 20.7% of all profits. In a live account with real margin, this drawdown could be amplified by assignment risk and margin calls. The strategy's 91.6% win rate masks the asymmetry: the average win is small (premium collected) while the average loss is large (put assignment or buyback at a loss). With 100 max positions allowed and 20% margin utilisation, a correlated market drop could trigger simultaneous losses across many positions. Consider stress-testing: if 10% of positions are assigned simultaneously during a 5% market drop, what is the portfolio impact?

Related patterns: vol_regime, vix_regime

#4 RECOMMEND: Explore 7-14 DTE expansion — 100% win rate on 36 trades

The 7-14 DTE bucket shows 100% win rate and 81.95% ROI across 36 trades, outperforming the dominant 0-7 DTE bucket (92% win, 52.02% ROI) on both dimensions. The slightly longer duration provides more time premium and potentially better risk-adjusted returns. Currently 94.4% of trades are 0-7 DTE, creating massive concentration in a single time structure. Allocating 20-30% of trades to the 7-14 DTE window would diversify time exposure and potentially improve overall returns. The 14-21 DTE bucket (25% win on 4 trades) suggests there's a cliff beyond 14 days — possibly because longer-dated puts face more earnings/event risk — so cap the expansion at 14 DTE.

Related patterns: dte_bucket

#5 HYPOTHESIS: Strong downtrend outperformance vs downtrend is suspicious

Strong downtrend shows 92% win rate and 64.49% ROI (179 trades), while plain downtrend shows 88% win rate and only 2.07% ROI (189 trades). This is paradoxical — stronger downtrends should be worse for put sellers, not better. Possible explanations: (1) strong downtrends trigger higher implied vol, generating richer premiums that more than compensate for risk; (2) strong downtrends may coincide with capitulation/bounce conditions where puts expire worthless after a V-recovery; (3) the trend classification algorithm may be mislabeling — 'downtrend' might capture the dangerous early phase of a decline while 'strong_downtrend' captures the exhaustion phase. This needs investigation before acting on it, as trading into strong downtrends based on this pattern could be catastrophic if the mechanism is regime-dependent.

Related patterns: trend_direction, vix_regime

#6 NOTE: RSI-based entry timing shows clear gradient

Neutral RSI (50-70) delivers 94% win / 70.22% ROI, and overbought (70+) delivers 94% win / 84.89% ROI, while low RSI (30-50) drops to 88% win / 25.79% ROI. This is mechanically consistent: selling puts when RSI is higher means the underlying has upward momentum, providing a natural buffer against the put being breached. The oversold bucket (92% win, 50.69% ROI on 79 trades) is interesting — it outperforms the low RSI bucket, possibly because extreme oversold conditions trigger mean reversion bounces. Consider adding an RSI floor filter: avoid entries when RSI is between 30-50 (the 'falling but not yet oversold' zone) which has the worst risk-adjusted returns.

Related patterns: rsi_bucket, trend_direction

#7 RISK: Monday concentration creates systemic weekend gap risk

520 of 718 trades (72.4%) are entered on Monday. This means the strategy is systematically selling puts after weekend gaps have already occurred, which may explain part of the edge (weekend theta decay captured). However, it also means the portfolio is maximally exposed to Monday-specific risks: weekend news events, gap-downs from Friday close, and Monday morning liquidity issues. If a major negative event occurs over a weekend, the strategy would be entering new short puts into a falling market at the worst possible time. The Tuesday bucket (91% win, 90.22% ROI on 105 trades) actually outperforms Monday (92% win, 44.30% ROI), suggesting some Monday entries could be deferred by a day for better results.

Related patterns: entry_day

#8 HYPOTHESIS: Sector data is too thin to act on — but Technology sample is promising

Only 23 trades have sector labels (3 Consumer, 20 Technology), versus 718 total trades. The Technology bucket (95% win, 97.68% ROI) looks excellent but represents only 2.8% of trades. Either the sector classification is incomplete for most trades, or the strategy is overwhelmingly trading index/ETF options without sector tags. Before making sector-based allocation decisions, the classification coverage needs to reach at least 80% of trades. If the missing 695 trades are primarily index options, that itself is a concentration risk worth quantifying.

Related patterns: sector