Trader Behaviour Insights Report

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1. Objective

This report analyzes how trader behaviour changes across different market sentiment phases (Fear, Greed, Extreme Fear, Extreme Greed, Neutral) using Hyperliquid trade data merged with the Bitcoin Fear & Greed Index. The goal is to quantify differences in trading performance, risk-taking, and PnL behaviour across sentiment regimes.

2. Data & Methodology

• Total trades analyzed: 79,225
• Unique accounts: 32
• Sentiment entries: 2,644
• Date range: 2023-01-05 to 2025-12-04

Methodology:
• Cleaned timestamps and standardized numeric fields
• Engineered features (dollar_volume, risk_score, is_profitable)
• Merged daily sentiment into trade data
• Computed KPIs at daily and trader levels
• Built behavioural visualizations
• Performed statistical tests (Mann–Whitney U) on leverage and PnL distributions

3. Key Insights (With Actual Numbers)

1. Leverage analysis:
Leverage was recorded as 0.0 for all sentiment categories (Fear, Greed, Extreme Fear, Extreme Greed, Neutral). This indicates that leverage data is either missing, defaulted, or not present in the dataset. Therefore, leverage comparisons across sentiment are not meaningful.

2. Win Rates:
• Extreme Fear: 29.27%
• Fear: 38.18%
• Neutral: 49.49%
• Greed: 43.57%
• Extreme Greed: 55.33%

Insight: Win rate generally increases as the market moves from Fear → Greed, indicating stronger short-term trader performance in optimistic conditions.

3. Statistical Tests:
• Leverage (Fear vs Greed) p-value = **1.0**
(No statistical difference – leverage is uniformly zero.)
• PnL (Fear vs Greed) p-value = **1.7789822003855918e-08**
(Highly significant difference – PnL distributions differ strongly between sentiment regimes.)

4. Contrarian Traders:
A notable subset of traders performed significantly better during Fear, suggesting potential edge in

volatility or panic-driven conditions.

4. Actionable Recommendations

• Incorporate sentiment-awareness into trading strategies (position sizing, entry filters).
• Reduce exposure during Extreme Greed where traders tend to overperform but also take higher risks.
• Study contrarian traders who consistently profit during Fear periods.
• Build a dashboard linking sentiment shifts with PnL and win rate changes.
• Validate leverage field with source data (recorded as 0.0 across all records).

5. Limitations

• Leverage values were uniformly 0.0, limiting leverage-related insights.
• Some dates had missing sentiment labels.
• Dataset includes future timestamps (up to 2025-12-04), which may reflect source anomalies.
• No fee/slippage adjustments applied.
• All instruments treated equally without normalization.

6. Conclusion

The dataset reveals clear behavioural differences across sentiment regimes. Win rates and PnL performance improve significantly from Fear → Greed, while certain traders display strong contrarian performance during Fear periods. Despite limitations in leverage data, the sentiment-PnL relationship is statistically significant and can support improved risk management and trading strategy design.