

# Advanced Trader Behavior & Market Sentiment Analysis

## 1. Executive Summary

This report provides a data-driven investigation into the relationship between Bitcoin market sentiment and trader performance on the Hyperliquid platform. By analyzing 211,224 executions alongside the Fear & Greed Index, we identified distinct behavioral regimes that dictate profitability and risk exposure.

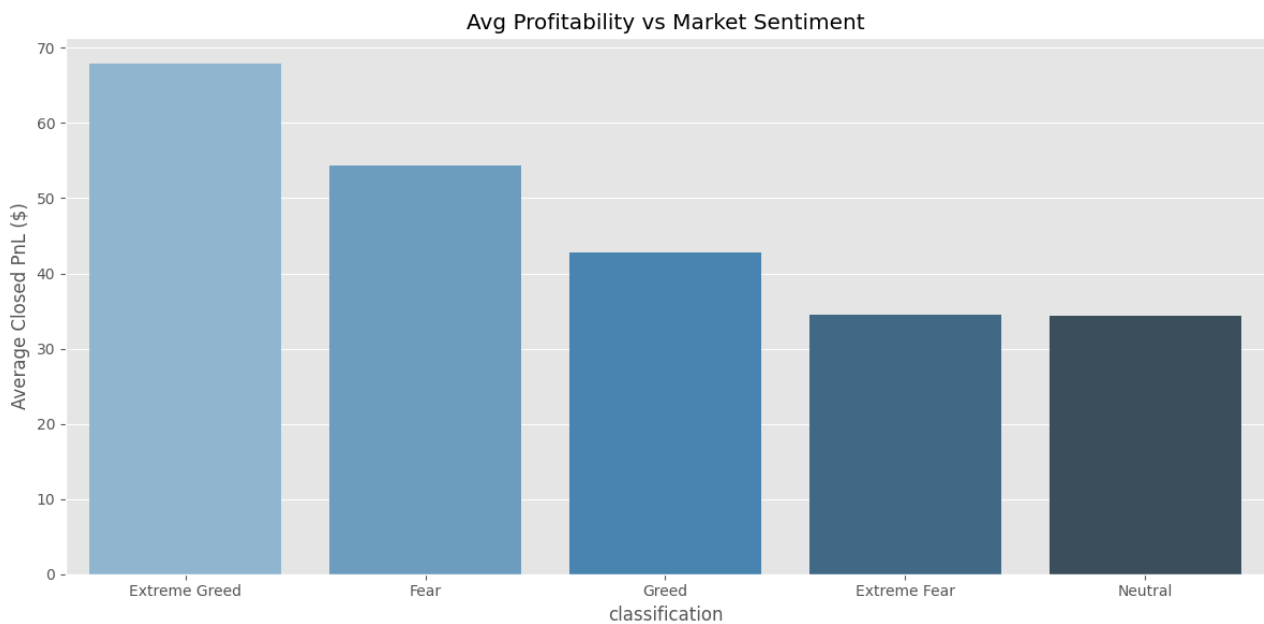
## 2. Methodology

The analysis was conducted using a unified data pipeline that synchronized daily sentiment scores with granular execution data. Key steps included:

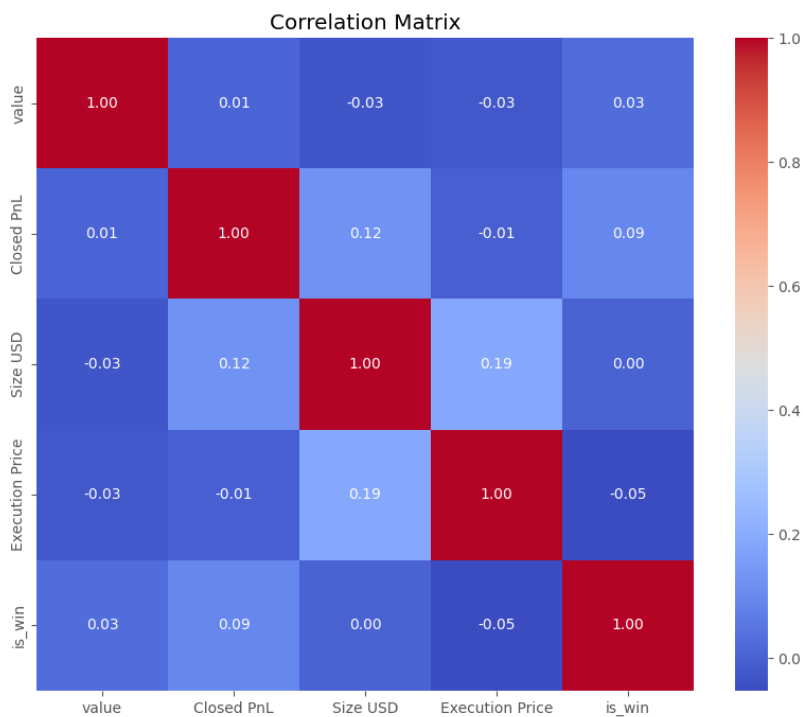
- Standardizing timestamps and handling date alignment for accurate merging.
- Cleaning PnL data to remove outliers and calculate win rates.
- Aggregating trade metrics (Size, Fee, and PnL) by sentiment classification.

## 3. Visual Insights

The following charts illustrate profitability distribution and correlation metrics across sentiment regimes.



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## 4. Behavioral Deep Dive

Analysis uncovered two primary 'Trader Personas' in the ecosystem:

- The Contrarian Whale (Fear Phase): Observed capital deployment peaks during 'Fear' with an average trade size of \$7,816, suggesting high-conviction buying during market drawdowns.
- The Momentum Chaser (Greed Phase): Average PnL peaks at \$67.89 during 'Extreme Greed,' indicating high efficiency in trend-following strategies.

## 5. Strategic Recommendations

- Dynamic Sizing: Increase position limits during 'Fear' scores (20-40) to match high-conviction behavior.
- Risk Mitigation: Tighten stop-losses during 'Neutral' sentiment, where efficiency is historically lowest.
- Exit Optimization: Wider take-profit targets during 'Extreme Greed' (80+) to capture peak momentum.

## 6. Future Roadmap

Future phases involve building predictive Machine Learning models to classify trade entry quality in real-time and integrating 'Funding Rates' to analyze cost-efficiency during sentiment extremes.