**Title:** Trader Performance vs Market Sentiment

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## 1. Methodology

This analysis explores how trader behavior and performance on Hyperliquid vary across different market sentiment regimes (Fear vs Greed). Bitcoin Fear & Greed classification was aligned with historical trader data at a daily level. Trades were aggregated per account per day to compute performance and behavioral metrics such as daily PnL, win rate, trade frequency, position size, fees, and directional bias.

Direct leverage data was not available; therefore, average trade size in USD was used as a proxy for risk exposure. Traders were segmented by activity level, risk exposure, and performance consistency to identify heterogeneous behavioral patterns.

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## 2. Key Insights

**Insight 1: Performance differs by sentiment**
Average daily PnL and win rates are higher during Greed days compared to Fear days. PnL distributions show heavier downside tails during Fear periods, indicating increased downside risk.

**Insight 2: Overtrading during Fear hurts performance**
High-activity traders experience significantly lower average PnL during Fear days compared to Greed days, suggesting that increased trading frequency under uncertainty leads to suboptimal outcomes.

**Insight 3: Risk amplifies losses during Fear**
Traders with larger average trade sizes (higher risk exposure) show amplified losses during Fear days, while lower-risk traders maintain relatively stable performance.

**Insight 4: Consistent traders are sentiment-resilient**
Traders with lower PnL volatility are less sensitive to sentiment changes, whereas volatile traders experience large performance swings, particularly during Fear regimes.

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## 3. Strategy Recommendations

1. **Sentiment-aware risk control**
   During Fear days, cap position sizes and avoid aggressive exposure, especially for historically volatile or high-risk traders.

2. **Activity moderation under uncertainty**
   High-frequency traders should reduce trade frequency during Fear periods and focus on higher-conviction setups to avoid overtrading losses.