



Trader Behavior vs Market Sentiment Report

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Notebook: notebook_1.ipynb

Objective

To analyze how trading behavior (profitability, leverage, volume, risk) aligns or diverges from market sentiment (Fear vs Greed) using two datasets:

- Bitcoin Fear & Greed Index
 - Simulated Hyperliquid Trader Data
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Key Observations



1. Sentiment Trends

- The **Fear & Greed Index** fluctuates over time, indicating changing emotional states of the market.
- Notable spikes in *Extreme Fear* or *Extreme Greed* suggest heightened volatility periods.



2. Trader Behavior Patterns

- **PnL Distribution:** Skewed with frequent losses, heavier during Fear phases.
- **Leverage vs Sentiment:**
 - Higher leverage usage observed during *Greed* or *Extreme Greed* phases.
 - Conservative leverage (or lower trade sizes) during *Fear*.



3. Sentiment–PnL Relationship

- Most **negative PnL events** cluster under *Extreme Fear*.
- More **profitable trades** appear when market sentiment is optimistic (Greed).

Insights & Recommendations

- Traders often **take higher risks during greedy markets**, possibly driven by FOMO.
 - **Fear periods coincide with higher losses**, hinting that emotional sentiment reflects risky volatility.
 - Strategy suggestion: Track sentiment daily to adjust leverage and position sizing intelligently.
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Included Visuals (See outputs/ folder)

- Fear & Greed Trend Over Time
- Distribution of Closed PnL
- PnL by Sentiment
- Leverage by Sentiment