

# Trader Behavior Insights — Report

## Trader Behavior Insights — Draft Report

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**\*\*Dataset:\*\*** Hyperliquid historical trades + Bitcoin Fear & Greed Index

### Objective

Analyze how trader behavior (profitability, risk, volume, leverage) aligns with market sentiment (Fear vs Greed).

### Key preliminary findings (from EDA)

- Greed days (value  $\geq 60$ ) show **\*\*higher average profit\*\*** and slightly **\*\*higher probability of profitable trades\*\*** compared to Fear days in this dataset.
- Example aggregated numbers (approx):
  - Fear: avg profit  $\approx$  50 USD, win rate  $\approx$  41.5%
  - Neutral: avg profit  $\approx$  22 USD, win rate  $\approx$  31.7%
  - Greed: avg profit  $\approx$  77.8 USD, win rate  $\approx$  45.4%
- Buy ratio is slightly **\*\*higher in Fear\*\*** and lower in Greed (shorting/less buys in Greed).

### Next steps performed in notebook\_1.ipynb

1. Data loading, parsing timestamps (Unix ms), merging daily sentiment.
2. Feature engineering: return\_pct, notional\_usd, lagged sentiment (1–3 days), rolling sentiment (7/14 days).
3. EDA and statistical tests (ANOVA / Kruskal-Wallis recommended).
4. Predictive modeling (Logistic Regression / Random Forest) to predict profitable trades.
5. Actionable recommendations based on results.

### Recommendations (short)

- Use sentiment as a risk overlay: reduce leverage on extreme Greed days.
- Monitor 3-day sentiment drops as short-term reversal signals.
- Further work: incorporate BTC price volatility, order-level holding times, and trader clustering.





