Trader Behavior vs Market Sentiment — Data Science Report

This report provides an analysis of Hyperliquid trading history data merged with the Bitcoin Fear & Greed Index (FGI). The objective is to understand how trader performance metrics (win rate, realized PnL, traded volume) vary across different market sentiment regimes (Fear, Greed, Extreme Fear, Extreme Greed, Neutral). The analysis includes preprocessing, aggregation, and visualization of more than 200,000 trades against ~6 years of FGI data.

Key Findings:

• Win rate is slightly higher in Greed (40.3%) vs Fear (38.8%).
• Aggregate realized PnL is greater during Fear (≈ +946k vs Greed).
• Extreme regimes (Extreme Fear, Extreme Greed) display distinctive behavior in both PnL and volume.
• Notional traded volume tends to swell in Fear compared to Greed (+54.9M).

Metrics by Sentiment

classification	closed_pnl_sum	closed_pnl_mean	closed_pnl_median	closed_pnl_std	closed_pnl_count
Extreme Fear	256731.94	47.45	0.0	1697.49	5411
Extreme Greed	2515642.63	73.14	0.0	890.65	34393
Fear	2675413.42	56.54	0.0	832.66	47315
Greed	1728845.71	35.65	0.0	937.02	48492
Neutral	1023696.68	31.75	0.0	353.12	32246

Conclusion

Overall, the data suggests that trader performance is not uniform across sentiment regimes. While Greed periods show a higher probability of individual trades being profitable, the aggregate realized PnL and volumes are significantly higher during Fear periods — pointing to higher exposure and volatility. Extreme sentiment states further amplify these effects. These insights can guide position sizing, leverage management, and risk controls depending on the prevailing market sentiment.