Trading Sentiment × Hyperliquid Trader Analysis
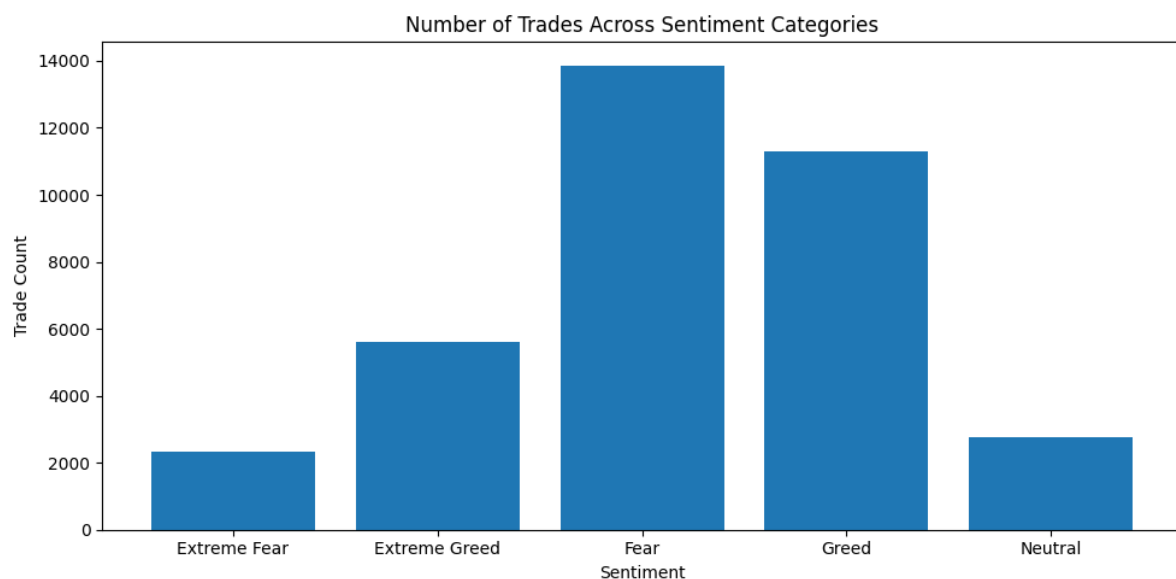
Executive Summary

This analysis investigates how Bitcoin market sentiment (Fear & Greed Index) interacts with trader performance, profitability, leverage usage, and behavioural patterns. While sentiment alone is not a reliable linear predictor of profit, it significantly influences trader behaviour, volatility regimes, and win-rate patterns especially during Extreme Greed and Extreme Fear.
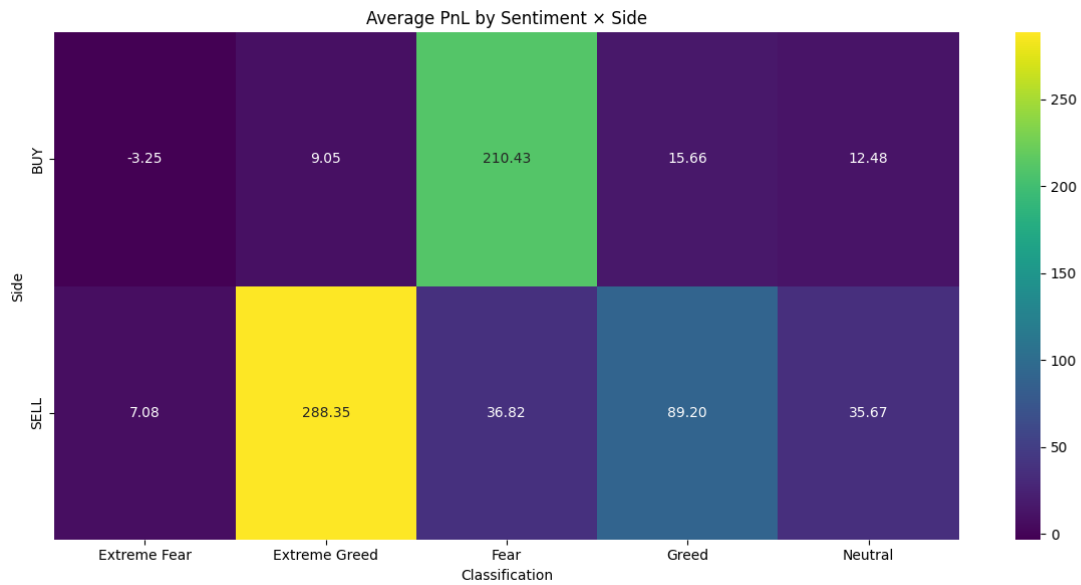
Key Highlights:

1. Extreme sentiment events create highly predictable +- 3-day volatility windows.
2. Top-performing traders reduce leverage during extreme sentiment conditions.
3. Bottom cohort traders increase leverage during the same periods indicating emotional overtrading.
4. Leverage, size, and side dominate predictive power in ML models.
5. Sentiment should be used as a risk modifier, not as a direct predictive input
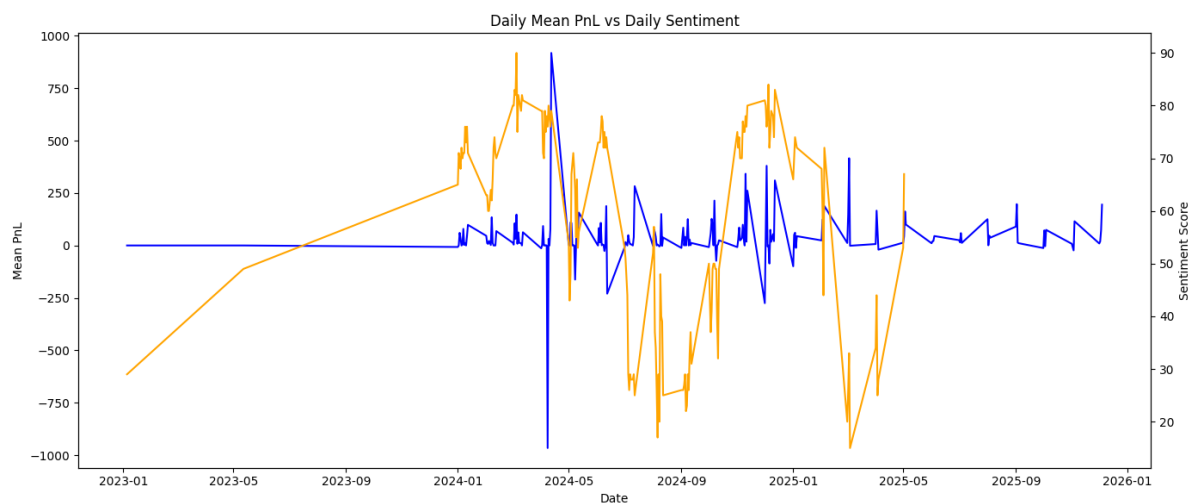
Sentiment vs Trading Behaviour

Fear, Greed, and Neutral days show drastically different trading volumes and profitability behaviours. The following chart highlights how sentiment correlates with number of trades

Number of Trades Across Sentiment Categories

A more granular view reveals how *PnL shifts across BUY/SELL* positions under each sentiment level
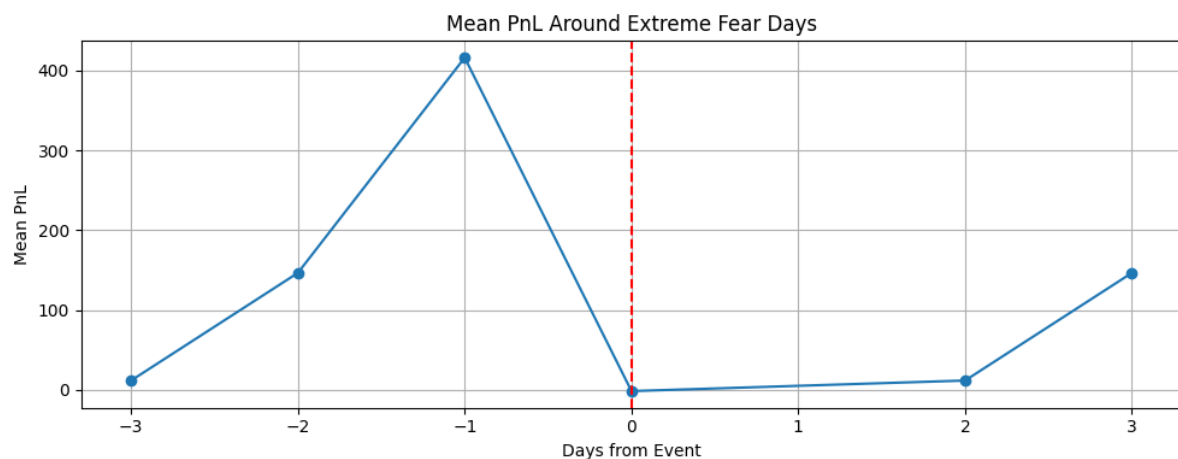
Average PnL by Sentiment × Side
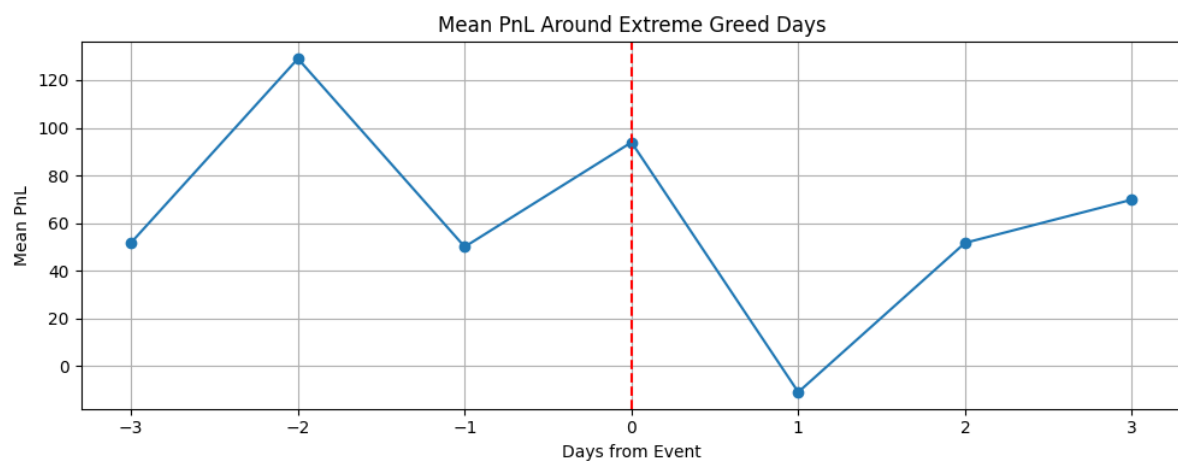
Daily PnL & Sentiment Trends

The relationship between daily sentiment and daily mean PnL is weak linearly, but the volatility patterns around event windows are strong.

Extreme Fear Event Window

Extreme Greed Event Window

Machine Learning Findings

ML models were trained to classify whether a trade ends positive or negative based on leverage, sentiment score, size, and trade side.

Key Insight

Sentiment score had low predictive influence, whereas leverage and trade side were significantly more informative

Feature Importances (Random Forest)