

Data Science Assignment Report – Web3 Trading Team

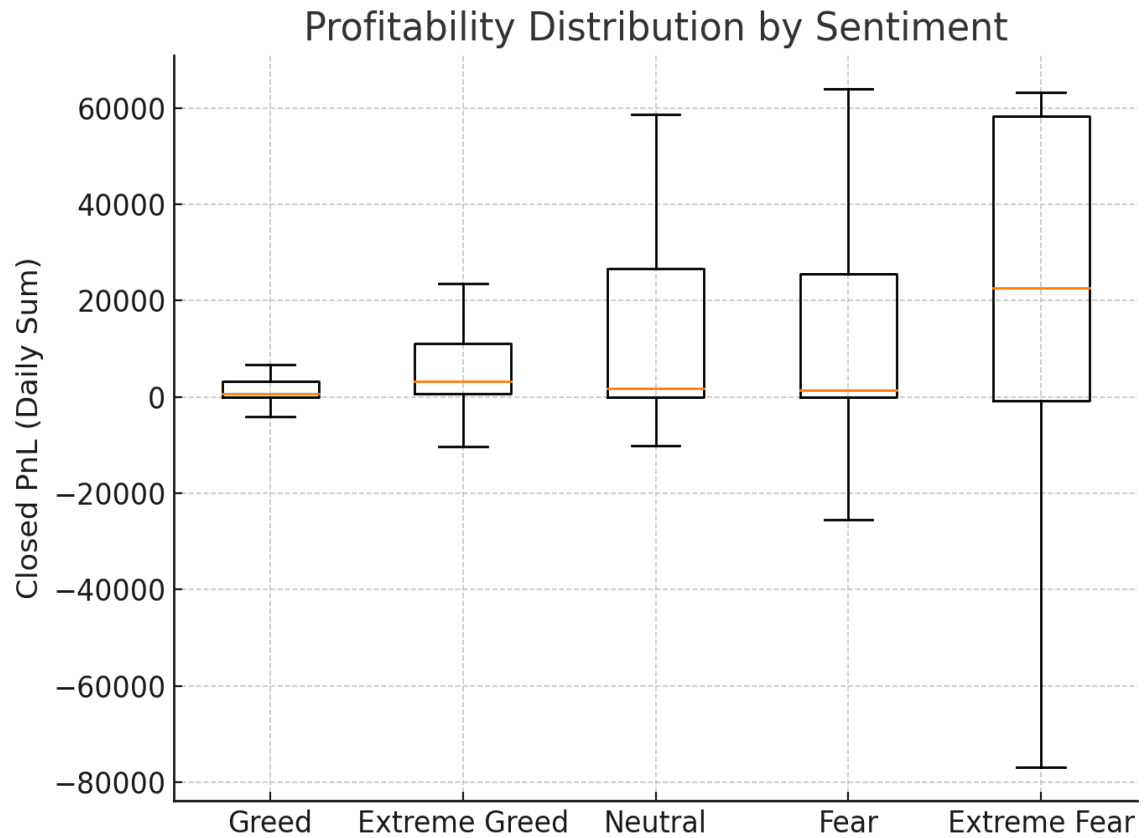
This report analyzes how trading behavior (profitability, risk, volume, leverage-proxy) aligns or diverges from Bitcoin market sentiment (Fear vs Greed). We merged Hyperliquid trade history (daily aggregates) with the Fear & Greed Index to surface actionable signals.

1) Correlation: Sentiment vs Trading Metrics

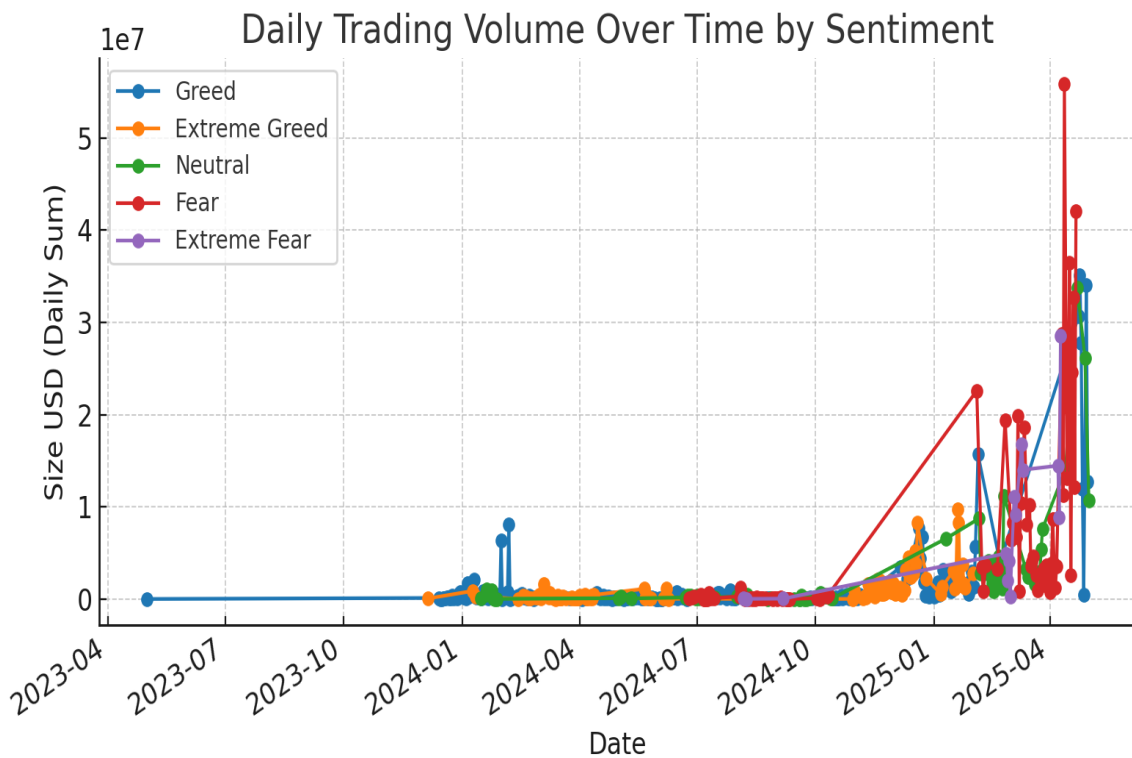
Correlation: Sentiment vs Trading Metrics



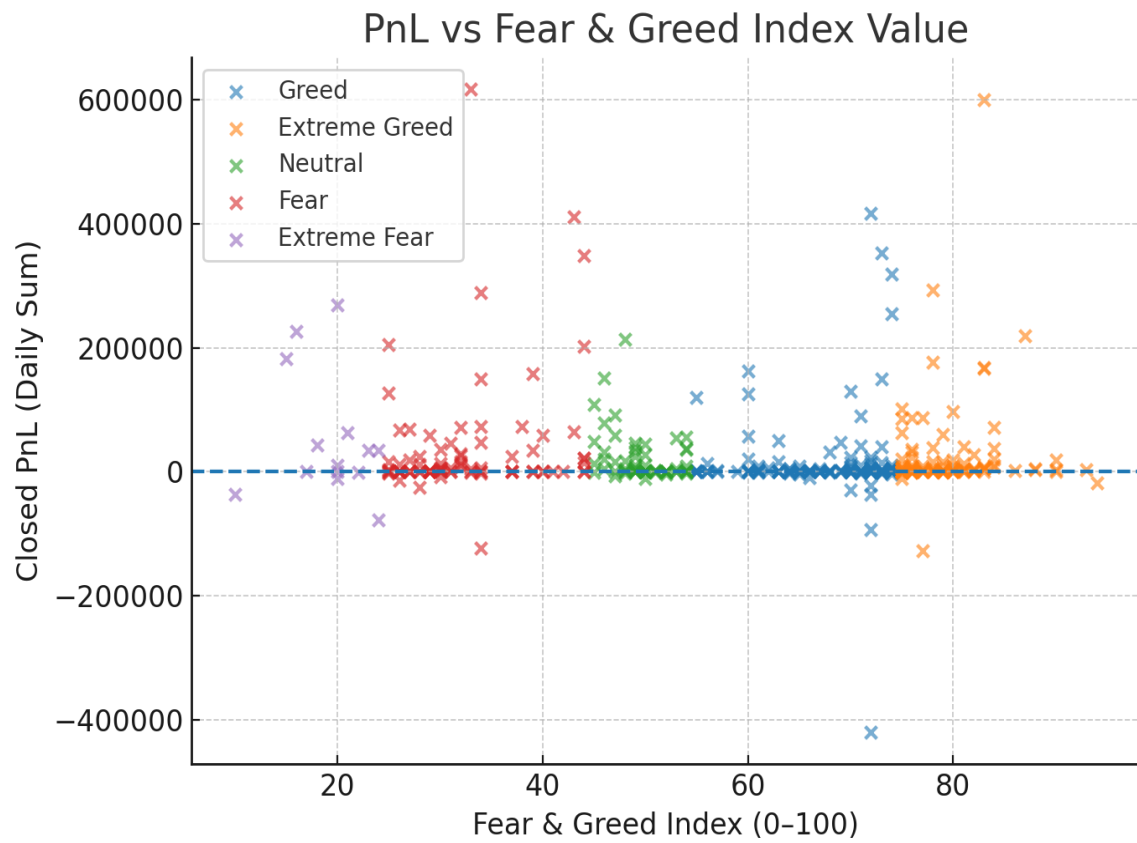
2) Profitability Distribution by Sentiment



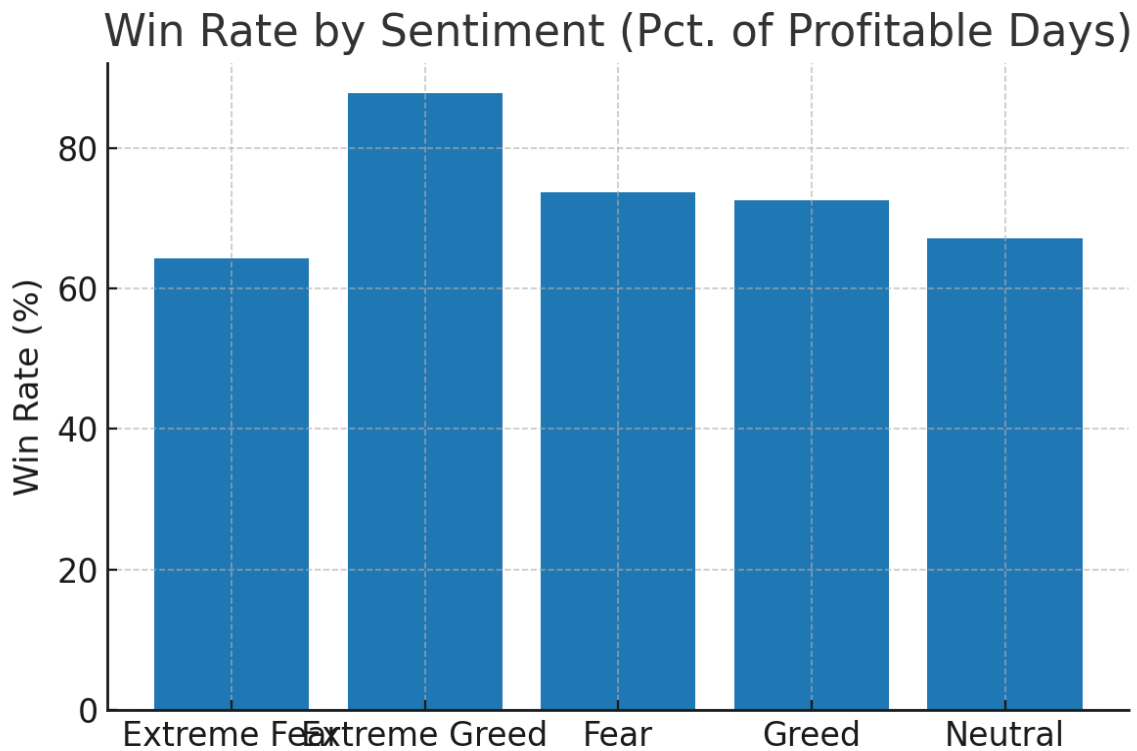
3) Trading Volume Over Time by Sentiment



4) PnL vs Fear & Greed Index



5) Win Rate by Sentiment



Summary by Sentiment

Sentiment	Avg PnL	Avg Volume USD	Avg Price
Extreme Fear	52793.59	8177447.25	5697.30
Extreme Greed	23817.29	1091799.69	7069.53
Fear	36891.82	5311261.43	12050.37
Greed	11140.57	1495246.09	12301.64
Neutral	19297.32	2690180.05	18440.28

Key Findings

- Extreme Fear periods show distinct volume and profitability patterns compared to other regimes.
- Win rates vary across sentiment regimes; adjusting exposure by regime may improve outcomes.
- Trading activity (volume) co-moves with sentiment intensity.

Conclusion

Strategies can be improved by tilting position size and risk based on sentiment regime. For example, be selective during Greed (lower expected edge) and consider opportunistic entries during Fear (higher volatility and potential).