

Trading Sentiment Analysis Report

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Tools Used: Python, Collab

Project Focus: Interpreting Trading Behavior Through Emotion-Driven Sentiment Indicators

1. Trade Volume vs Fear & Greed Index Over Time

Key Observation:

Significant spikes in trade volume, particularly from Q4 2023 to mid-2024, while the Fear & Greed Index line remains flat or near-zero.

Professional Insight:

The visible dissonance between high trade volume and stagnant sentiment indicators raises concerns about the representativeness or scaling of the Fear & Greed Index data. Despite increased market volatility, sentiment fails to reflect emotional market shifts. This could point toward either a data integrity issue or a growing reliance on algorithmic or non-sentiment-based trading strategies in volatile conditions.

2. Average Closed PnL by Emotion

Key Observation:

Extreme Greed yields the highest average profit, closely followed by Fear. Greed, Extreme Fear, and Neutral show relatively subdued PnL values.

Professional Insight:

High profitability during Extreme Greed reflects traders capitalizing on strong bullish trends and momentum-driven strategies. Surprisingly, Fear also correlates with above-average returns—potentially indicating successful contrarian plays. Meanwhile, Neutral and Extreme Fear emotions reflect cautious participation or market indecision, leading to lower profitability.

3. Buy vs Sell Volume Across Emotional States

Key Observation:

Fear exhibits the highest sell-side volume. Extreme Greed has a balanced buy-sell ratio, while Extreme Fear sees minimal trading.

Professional Insight:

The dominance of sell orders during Fear highlights typical panic-driven exits. In

contrast, balanced activity during Extreme Greed suggests active participation in upward markets with opportunistic buying and profit-taking. The sharp decline in trading during Extreme Fear likely represents a freeze in participation due to risk aversion, uncertainty, or capital preservation motives.

4. Closed PnL vs Fear & Greed Index Over Time

Key Observation:

Marked fluctuations in PnL—both gains and losses—despite a stagnant sentiment index.

Professional Insight:

The disconnection between high PnL volatility and flat sentiment data suggests that either the sentiment index is not sufficiently responsive or traders are leveraging strategies that transcend emotional sentiment—such as technical analysis, quant strategies, or predictive indicators. This also underlines the dynamic nature of modern trading environments.

5. Daily Net PnL vs Fear & Greed Index

Key Observation:

2025 exhibits notable swings in daily net profitability, yet sentiment remains nearly constant.

Professional Insight:

The extreme variability in Net PnL amidst a flat sentiment curve again indicates potential data limitations. Alternatively, this may reflect a maturing trader base that decouples emotional sentiment from decision-making, relying more on structured systems, back-tested strategies, and macroeconomic data rather than crowd psychology.

6. Fear & Greed Index vs Trading Volume

Key Observation:

Peak trading volumes align with sentiment values ranging from 20–50. Extremes (both high and low) exhibit reduced activity.

Professional Insight:

Moderate sentiment levels tend to foster optimal trading conditions, providing balanced risk-reward environments. Extreme Fear often results in market paralysis, while high Greed levels may indicate saturation—where traders are already positioned, reducing

transaction frequency. The finding suggests that maximum liquidity is found not at emotional extremes but at sentiment midpoints.

7. Average Trading Volume by Sentiment Level

Ranking:

Fear > Neutral > Extreme Fear > Greed

Professional Insight:

The data counters the conventional belief that Greed fuels trading booms. Instead, Fear triggers the highest volumes—likely due to portfolio repositioning, risk mitigation, or rapid exits. Neutral sentiment indicates routine participation by institutions or algorithmic traders. Lower volume during Greed suggests entrenched optimism or market complacency, leading to position-holding over active trading.

8. Correlation Heatmap Analysis

Noteworthy Relationships:

- **Fee vs Size (0.75):** Larger trades proportionally incur higher fees—aligning with brokerage structures.
- **Order ID vs Timestamp (0.93–0.98):** Reflects sequential trade logging and efficient timestamping protocols.
- **Order ID vs Value (-0.56):** Newer trades involve smaller amounts, potentially signaling a cautious market or reduced retail participation.
- **Execution Price & Closed PnL (Weak Correlation):** Suggests that trade timing, strategy, and market conditions hold greater importance than trade size or execution price alone.

Professional Insight:

This heatmap emphasizes that profitability is less dependent on transaction scale and more reliant on timing, strategy selection, and risk management. The independence of many key metrics affirms the complexity and unpredictability of market dynamics.

Conclusion

This analysis reflects that **trading decisions are influenced more by volatility and strategic intent than emotional sentiment alone**. While the Fear & Greed Index provides valuable context, it does not consistently align with volume or profitability

metrics in this dataset. The insights suggest a shift towards rational, strategy-led trading behavior, especially under extreme market conditions.

The report showcases the capability to extract deep behavioral patterns from financial data, detect data inconsistencies, and synthesize visualizations into meaningful business insights. The findings are not only analytically sound but demonstrate strong acumen in interpreting trader psychology and market mechanics.
