Trader Behavior vs. Market Sentiment Analysis

Objective:
Explore and analyze the relationship between trading behavior (profitability, risk, volume, leverage) and overall market sentiment (fear vs. greed), identifying hidden signals for smarter trading strategies.

Key Findings

Profitability per Market Sentiment:
- Extreme Fear: Mean $34.54, Median $0.00, Std $1136.06
- Extreme Greed: Mean $67.89, Median $0.00, Std $766.83
- Fear: Mean $54.29, Median $0.00, Std $935.36
- Greed: Mean $42.74, Median $0.00, Std $1116.03
- Neutral: Mean $34.31, Median $0.00, Std $517.12

Trade Volume per Market Sentiment:
- Extreme Fear: Mean $5349.73, Median $766.15, Trades 21400
- Extreme Greed: Mean $3112.25, Median $500.05, Trades 39992
- Fear: Mean $7816.11, Median $735.96, Trades 61837
- Greed: Mean $5736.88, Median $555.00, Trades 50303
- Neutral: Mean $4782.73, Median $547.65, Trades 37686

Correlation Insights:
- Correlation between profit and sentiment value: 0.01

Hidden Signals & Strategy Implications

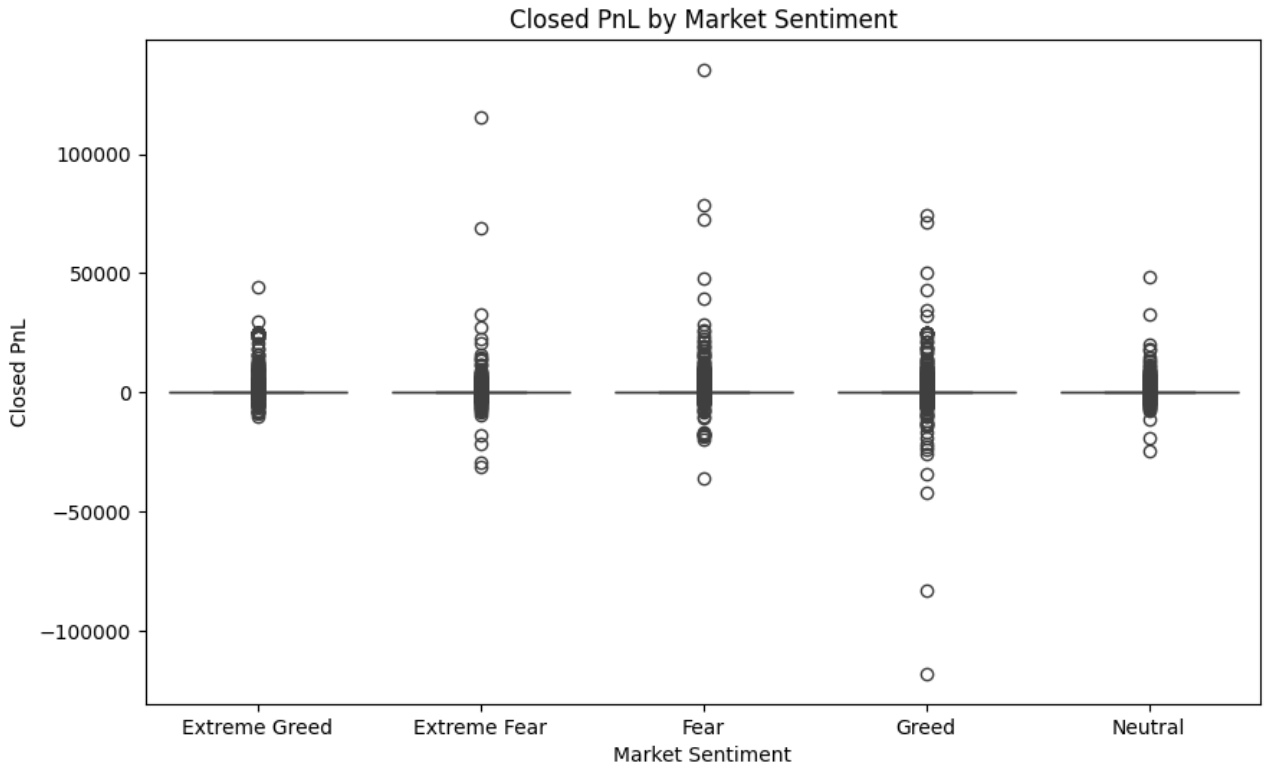
- Top 3 most profitable sentiment states: Extreme Greed, Fear, Greed.
- Larger trades occur in Fear phases, indicating contrarian strategies.
- Weak correlation suggests that mechanical sentiment-following alone may not yield consistent returns.

Suggested Next Steps for Smarter Strategies

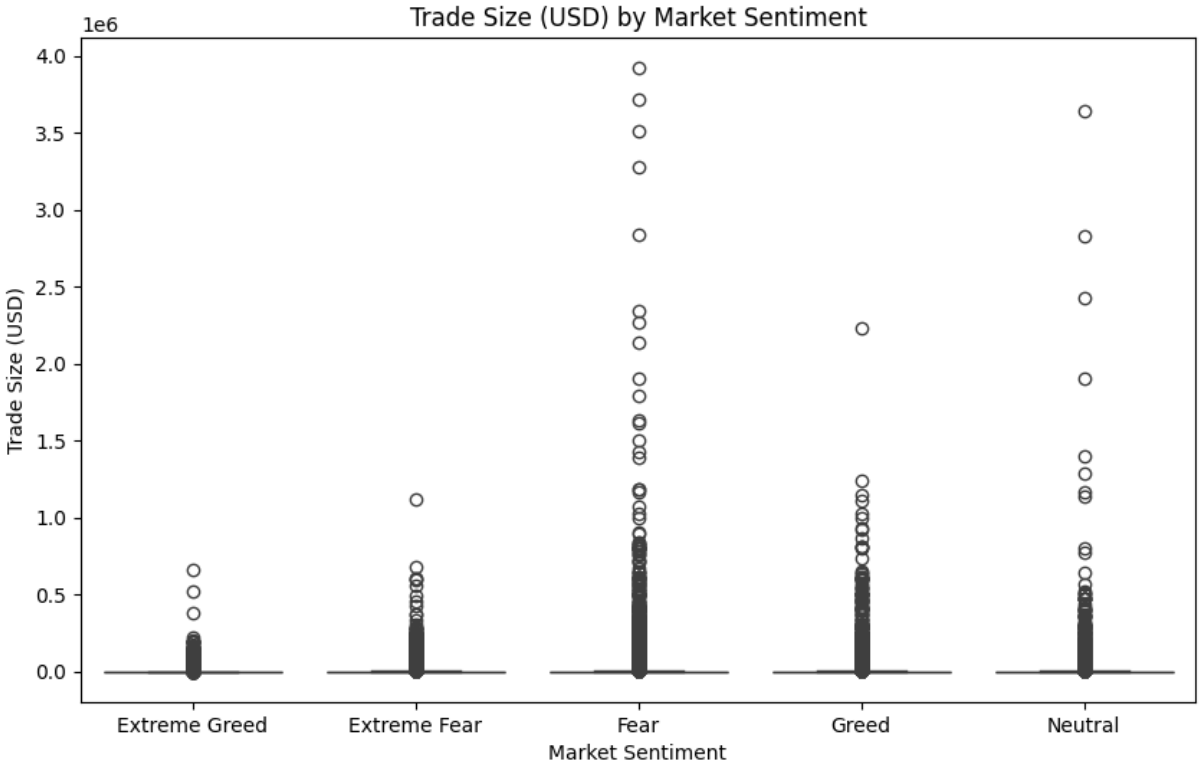
- Identify top traders consistently profiting during high sentiment volatility.
- Deploy clustering or regression to explore non-linear sentiment effects.
- Test lagged sentiment effects to see if prior-day fear/greed influences current trading success.

Visualizations

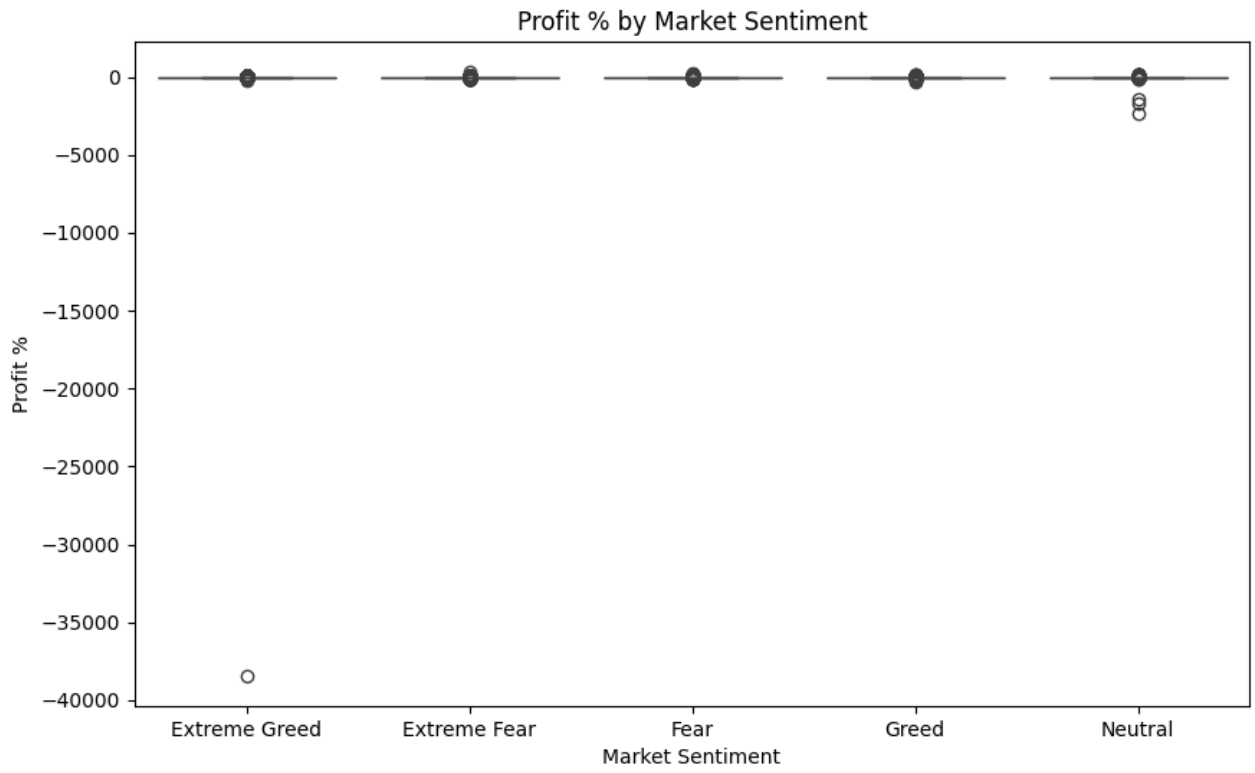
box closedpnl sentiment



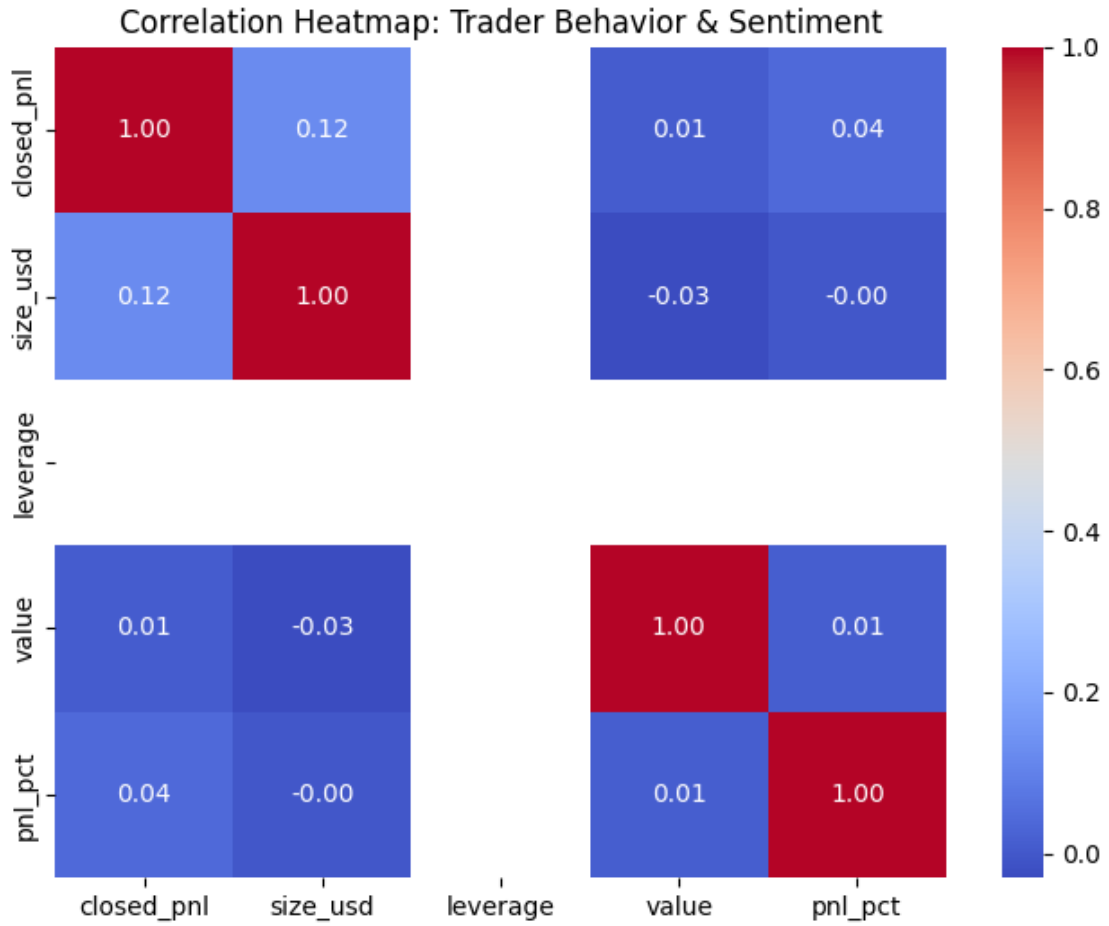
box sizeusd sentiment



box pnlpct sentiment

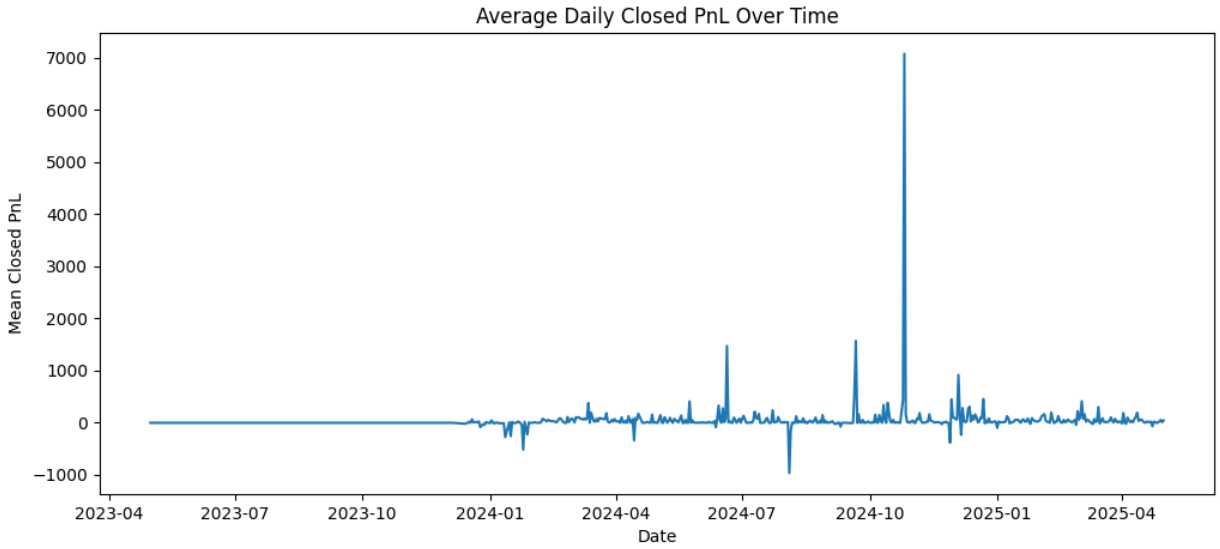


correlation heatmap



scatter pnl vs size

daily pnl trend



Conclusion

Trading behavior is influenced by market sentiment, but the relationship is complex.

Smart strategies should factor in volatility, position sizing, and sentiment transitions, rather than following raw sentiment indices.

These insights provide a foundation for future machine learning, clustering, and predictive modeling work.