

Trader Behavior Insights Report

Objective:

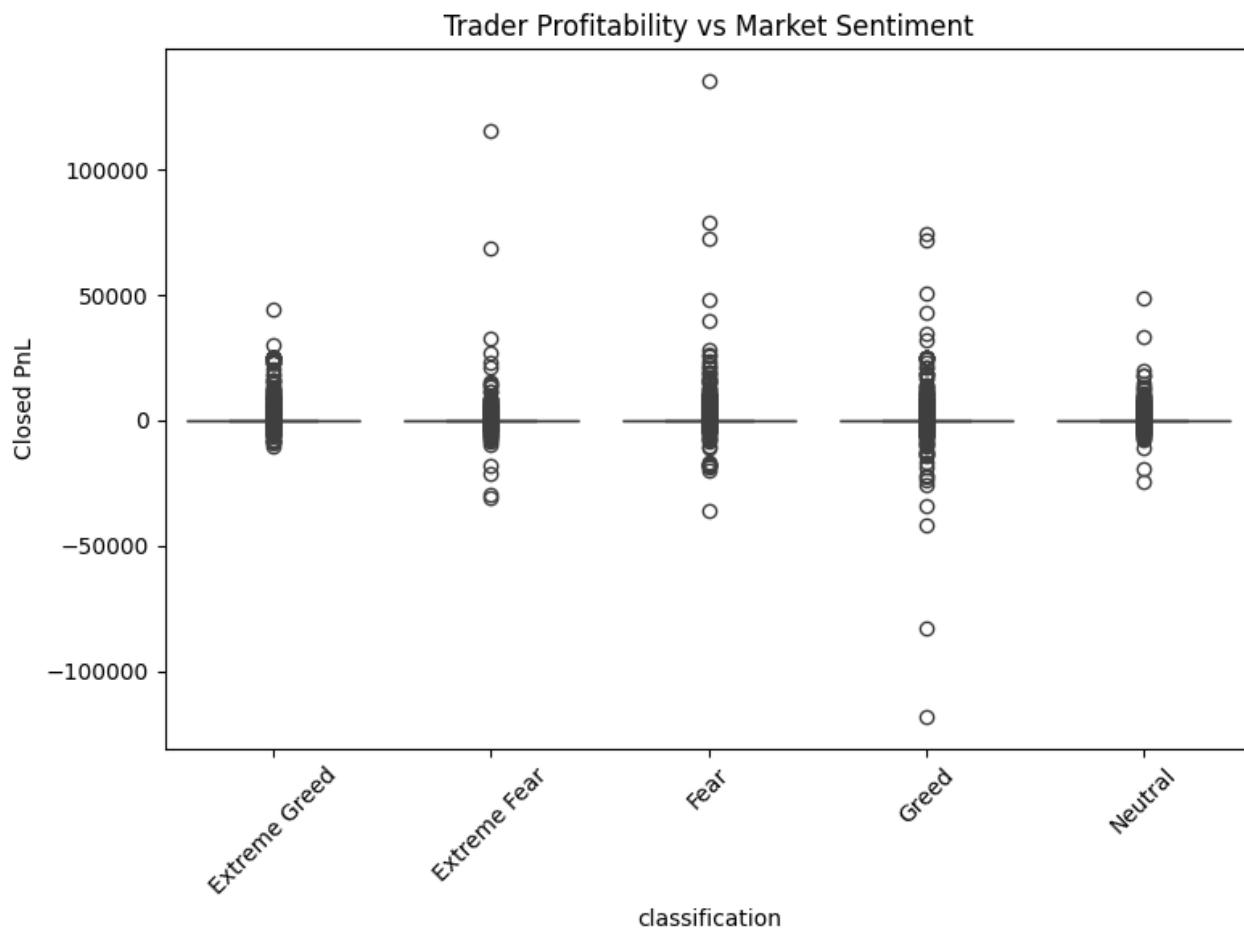
Explore the relationship between trader behavior and Bitcoin market sentiment to uncover insights for smarter trading strategies.

Methods:

- Datasets: historical_data.csv and fear_greed_index.csv
- Merged datasets on 'date'
- Converted timestamps to datetime
- Metrics calculated: Average PnL, Trade Size, Leverage, Buy/Sell distribution
- Visualizations created: Bar charts, stacked charts, heatmaps

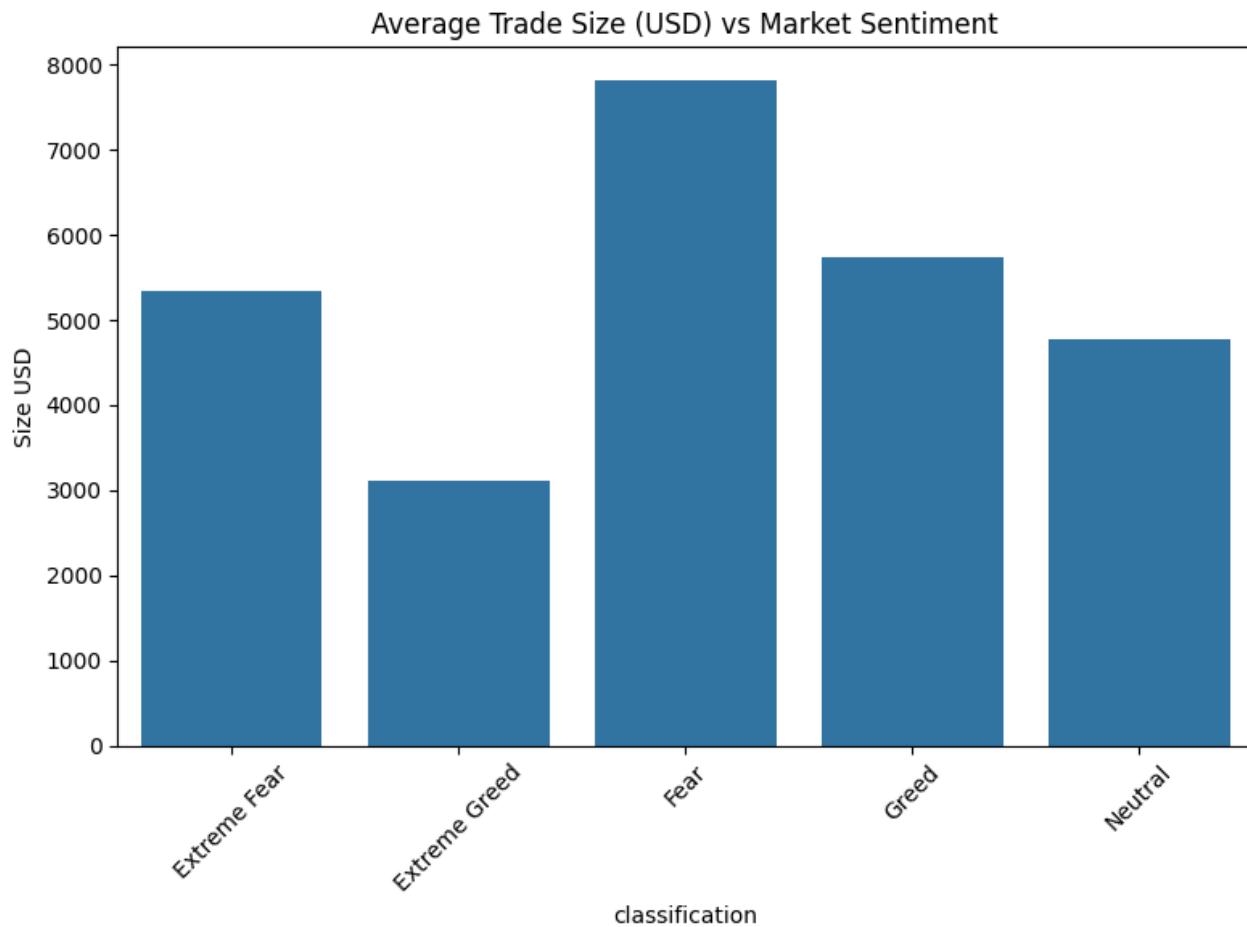
Closed PnL vs Sentiment

Insight: Traders generally make larger profits on Greed and Extreme Greed days. On Extreme Fear days, average PnL is negative.



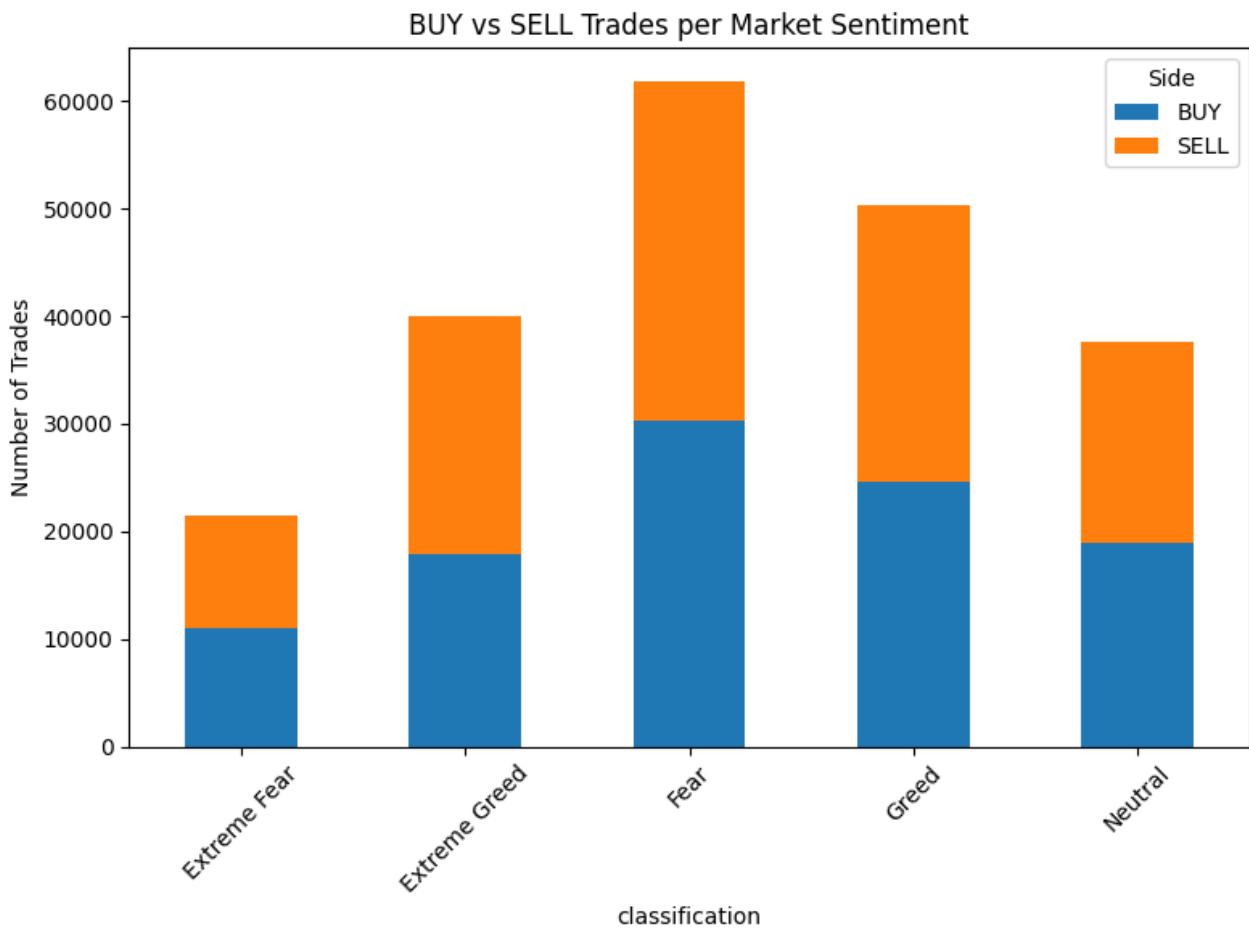
Average Trade Size vs Sentiment

Insight: Average trade size increases on Greed/Extreme Greed days. Smaller positions on Fear/Extreme Fear days.



Buy/Sell Per Sentiment

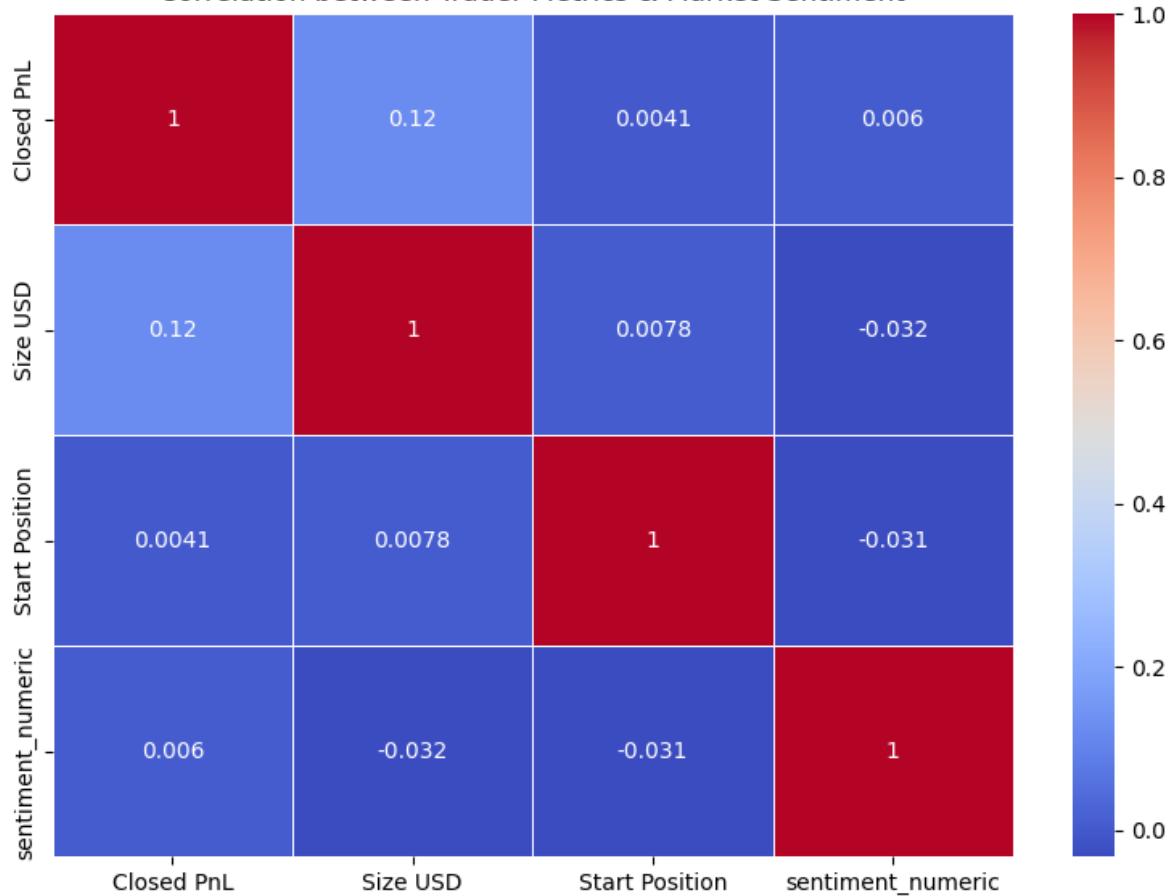
Insight: Buy trades dominate on Greed days; Sell trades increase during Fear days.



Correlation Heatmap

Insight: Trade size and PnL are positively correlated. Leverage shows weak correlation with sentiment.

Correlation between Trader Metrics & Market Sentiment



Recommendations:

- Avoid large positions on Extreme Fear days to reduce losses.
- Monitor trades on Extreme Greed days due to higher leverage.
- Adjust Buy/Sell strategies according to sentiment.
- Optimize trade sizes for Fear/Greed cycles.