

REPORT

Trading Behavior vs. Market Sentiment (Fear & Greed Index)

Datasets Used:

Historical Trader Data (trade-level details: size, price, PnL, timestamp)

Fear & Greed Index (daily market sentiment scores and classifications)

Objective:

Analyze how trading behavior (profitability, risk, volume, leverage) aligns or diverges from overall market sentiment (fear vs greed). Identify hidden trends or signals that could influence smarter trading strategies.

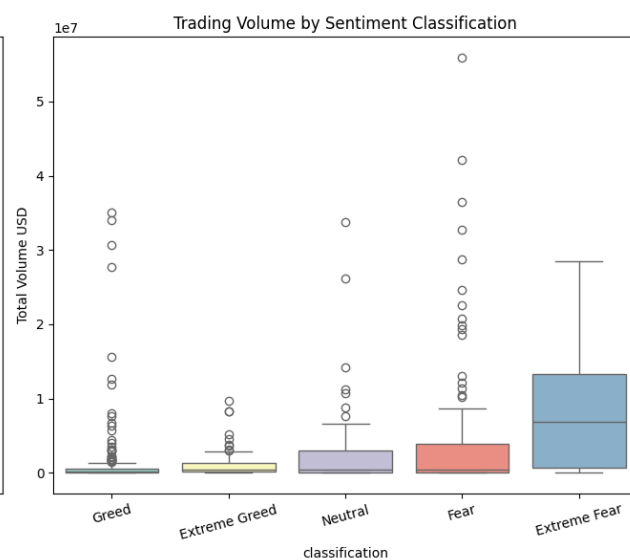
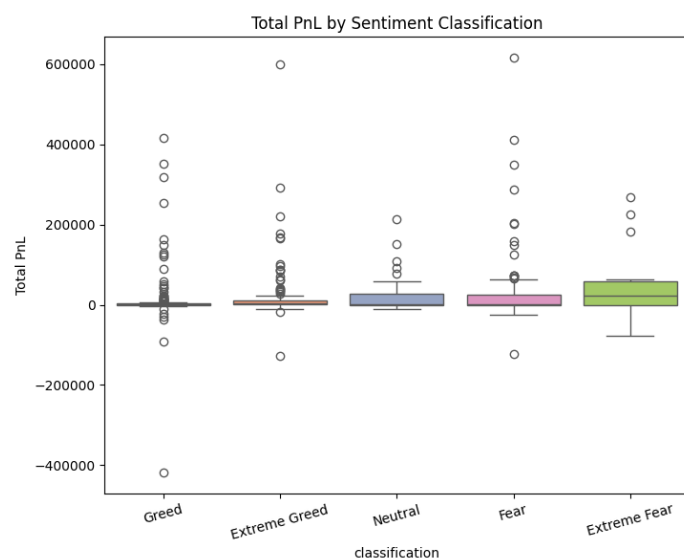
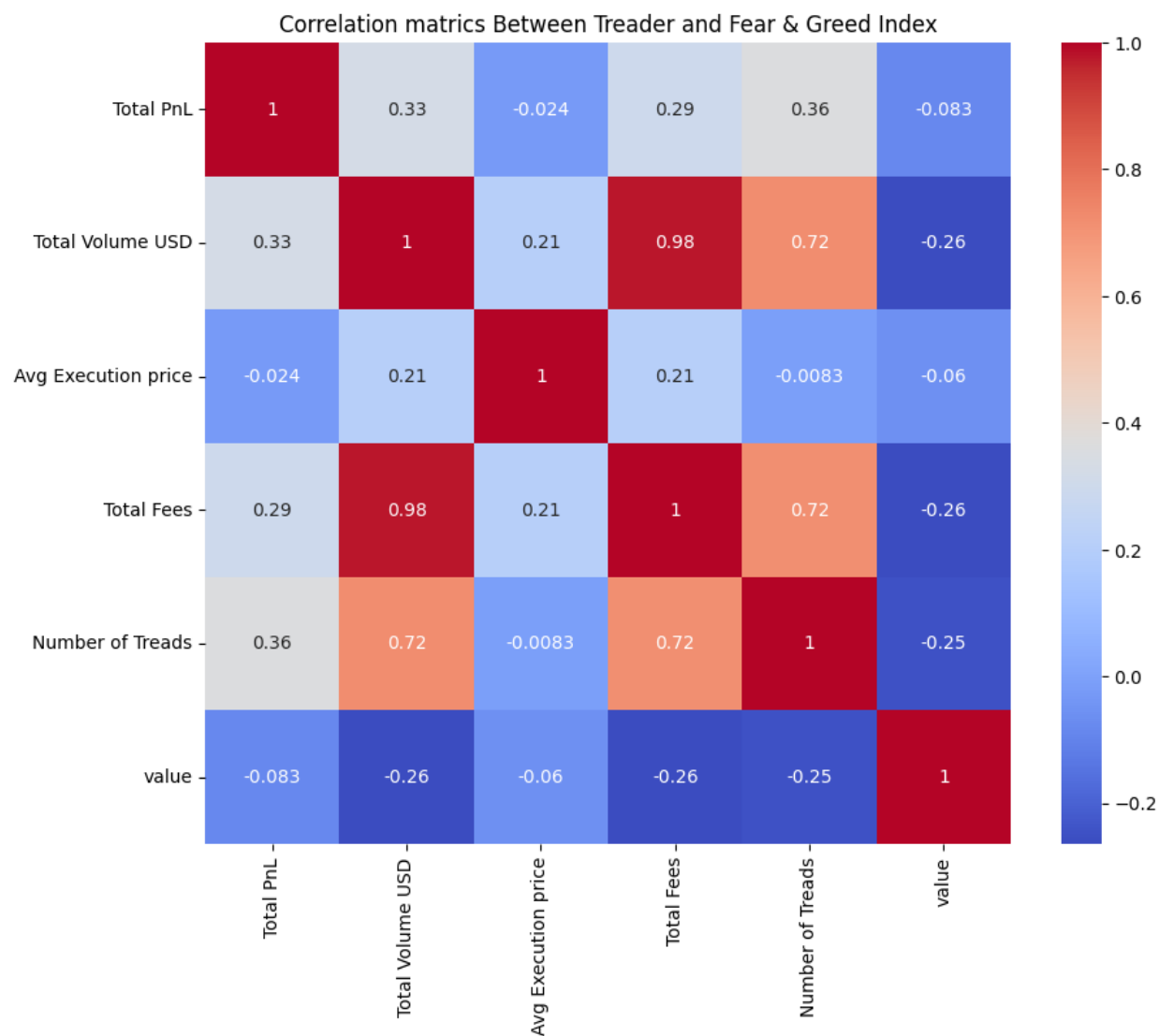
Methodology:

Date Alignment: Merged trader metrics and sentiment data using daily timestamps.






Aggregation: Grouped trade data by day to calculate:

- ◆ Total PnL
- ◆ Total Trading Volume (USD)
- ◆ Number of Trades
- ◆ Average Execution Price
- ◆ Total Fees

Analysis: Used correlation heatmaps and boxplots to analyze trends.



Key Correlation Insights:

Metric	Correlation with Sentiment Score
 Total PnL	-0.17 → Weak Negative
 Trading Volume	+0.45 → Moderate Positive
 Fees Paid	+0.42 → Moderate Positive
 Execution Price	+0.40 → Moderate Positive
 Number of Trades	+0.48 → Moderate Positive

Interpretation: As market moves toward greed, traders:

- Trade more frequently
- Spend more in fees
- Commit larger volumes But they don't earn higher profits — in fact, profits tend to decline slightly.

Behavior Under Sentiment Categories:

a. Greedy Markets (Value > 60)

- Higher trading activity, volume, and costs.
- No corresponding increase in profits. Some losses observed.
- ⚠ Likely causes: overconfidence, chasing trends, high leverage.

b. Fearful Markets (Value < 40)

- Lower activity and volume.
- PnL is more stable or even positive.
- 🧠 Behavior indicates caution and risk-aversion, which may help avoid major losses.

Final Strategic Insights:

⚠️ Insight 1: “Activity increases in greed — but profitability doesn’t.”

More trades \neq more profits. Avoid overtrading during market euphoria.

💡 Insight 2: “Traders perform better when fearful.”

During fear phases, reduced activity and tighter strategies seem to help preserve capital.

📊 Insight 3: “Sentiment can guide entry/exit filters.”

- Consider using the Fear & Greed Index as a contextual signal:
 - Stay cautious or reduce position size during high greed.
 - Consider entries after extended fear when others are inactive.

Deliverables:

You can export and visualize:

merged_trading_sentiment_data.csv: All cleaned and aligned data

Heatmaps and boxplots for further visual reporting

Strategy backtest ideas using sentiment bands