

Market Sentiment & Trader Performance Analysis

Data Science Assignment – by Devansh Srivastava

Objective -

The goal of this project was to explore the relationship between Bitcoin market sentiment (Fear & Greed) and trader behavior/performance on the Hyperliquid platform.

Using two datasets:

1. Fear & Greed Index – a daily sentiment score (0 = Extreme Fear, 100 = Extreme Greed)
2. Trader Historical Data – detailed records of thousands of crypto trades

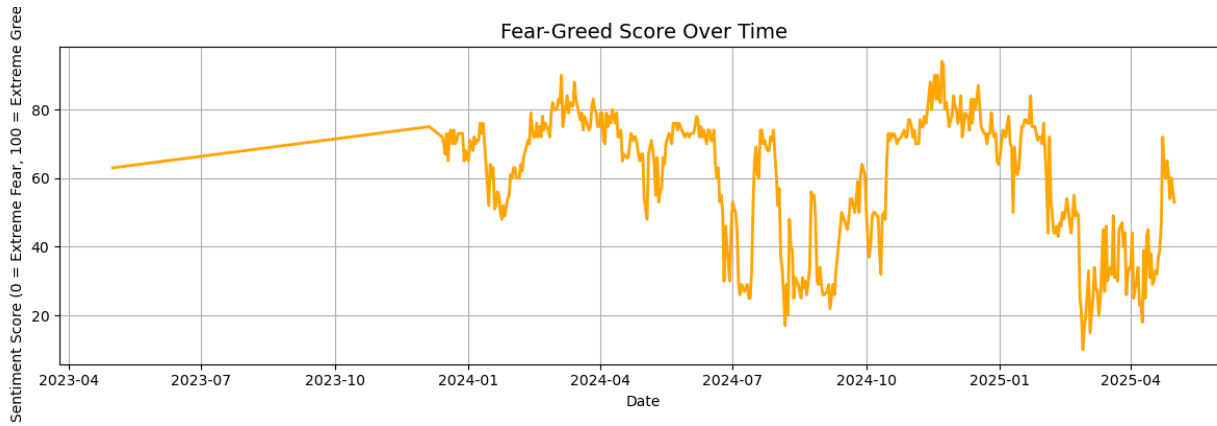
Methodology (What I Did)

- Cleaned and merged both datasets based on date
- Engineered new features like trade size (USD), day-wise trade counts, etc.
- Created visuals to uncover patterns in:
 - Trader activity across sentiments
 - Profit & Loss behavior
 - Most traded coins
 - Trade directions (Buy/Sell)
 - Trade sizes
- Delivered insights from the charts with contextual interpretation

Visuals + Insights

1. Fear-Greed Index Over Time

Shows how market sentiment changed over the observed period

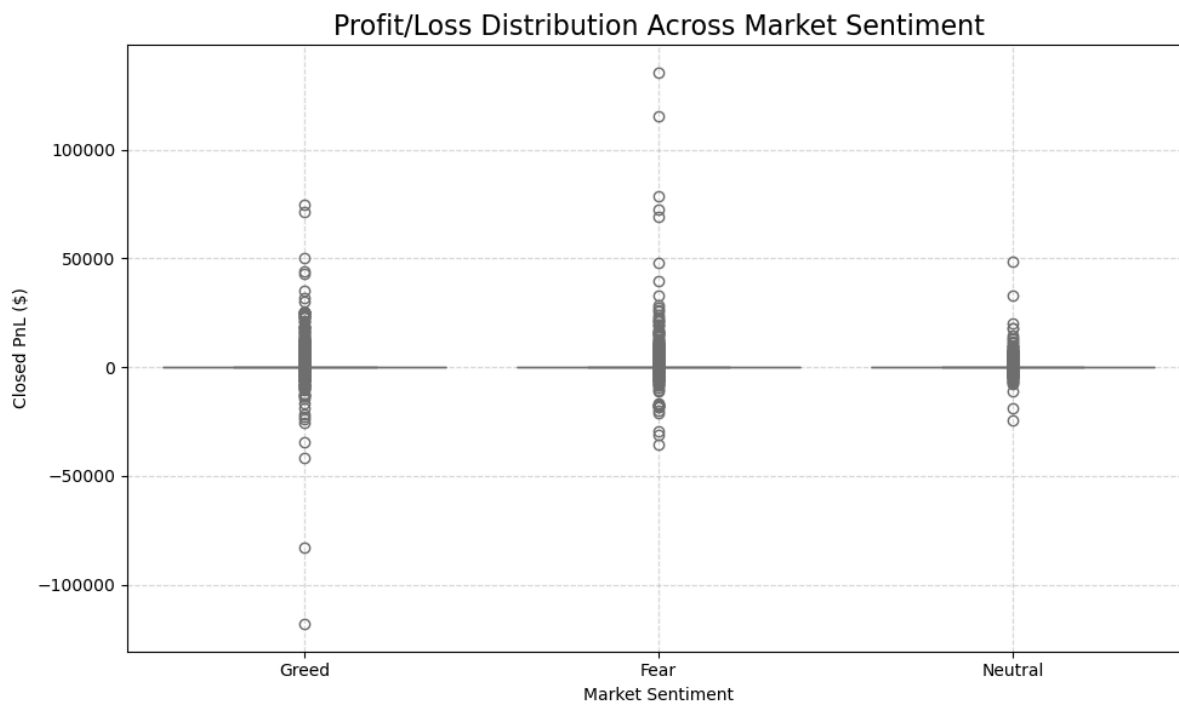


Insight:

We observed sharp oscillations between fear and greed phases, highlighting Bitcoin's high volatility and emotional market reactions.

2. Profit/Loss Distribution vs Sentiment

How trader PnL varied across Fear, Neutral, and Greed markets

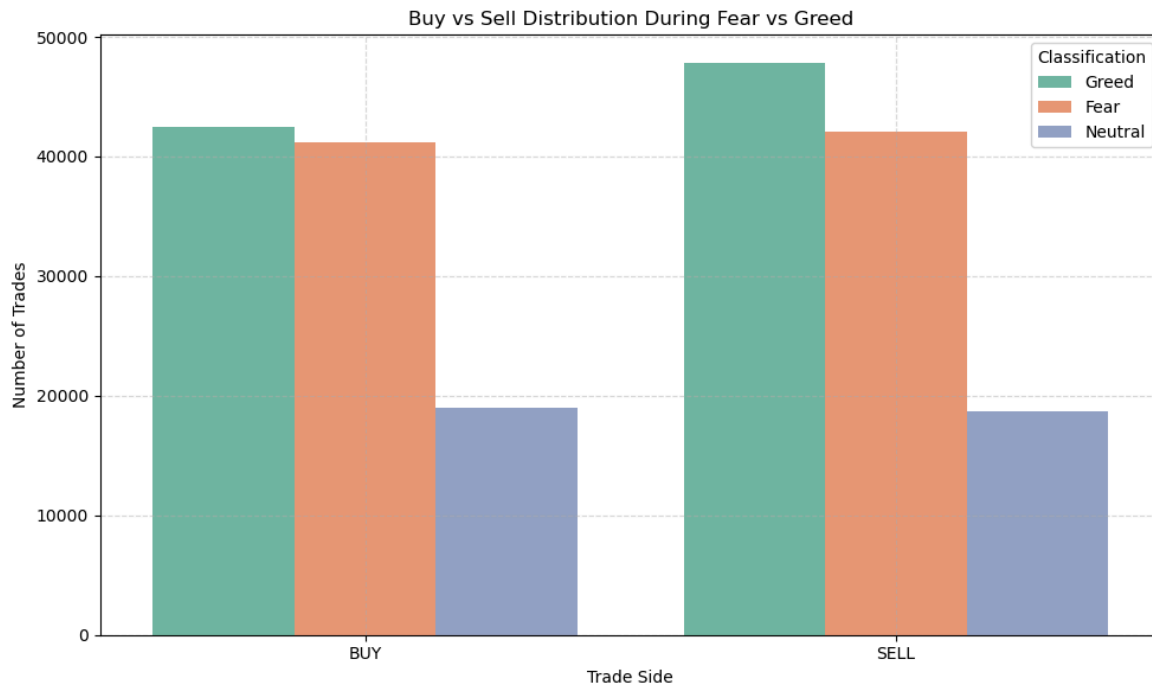


Insight:

Losses were more widespread during Fear periods, but surprisingly, large profits were also achieved — likely by contrarian or leveraged strategies.

3. Buy vs Sell Behavior Across Sentiments

Trade directions under different emotional phases

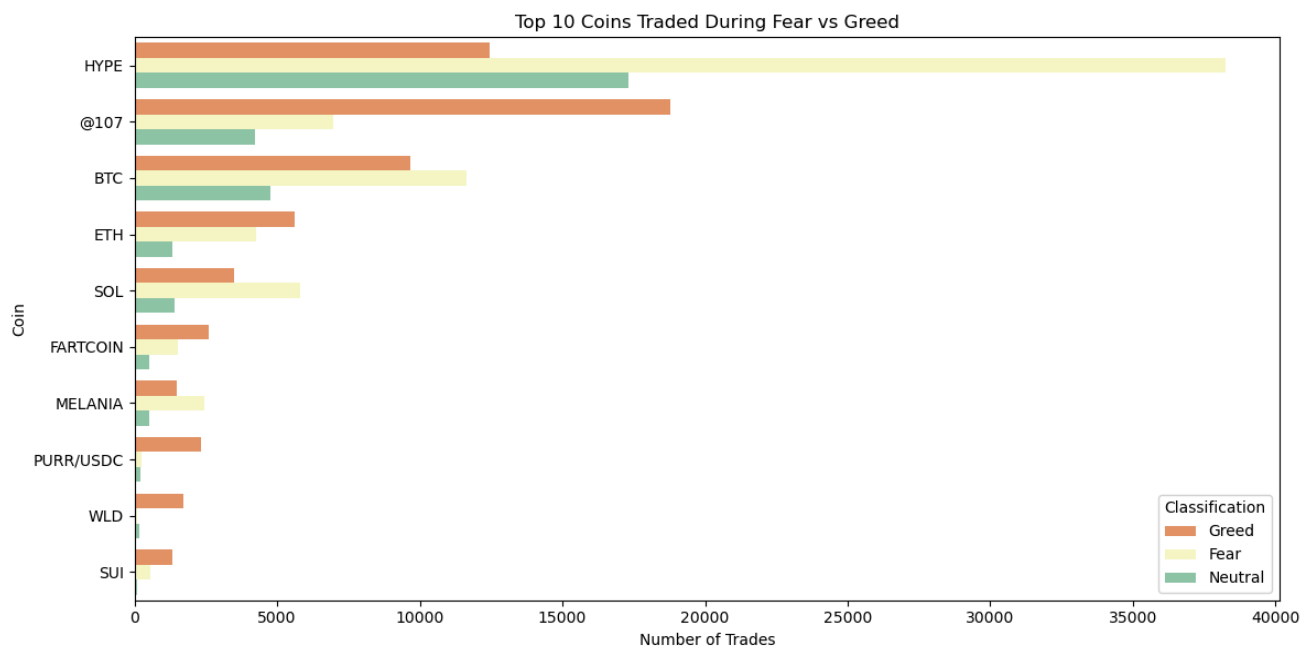


Insight:

"Sell" trades spiked slightly during Fear, hinting at panic exits. In contrast, Buy/Sell were balanced during Greed — suggesting confidence or FOMO entries.

4. Most Traded Coins During Fear vs Greed

Which coins were people flocking to?

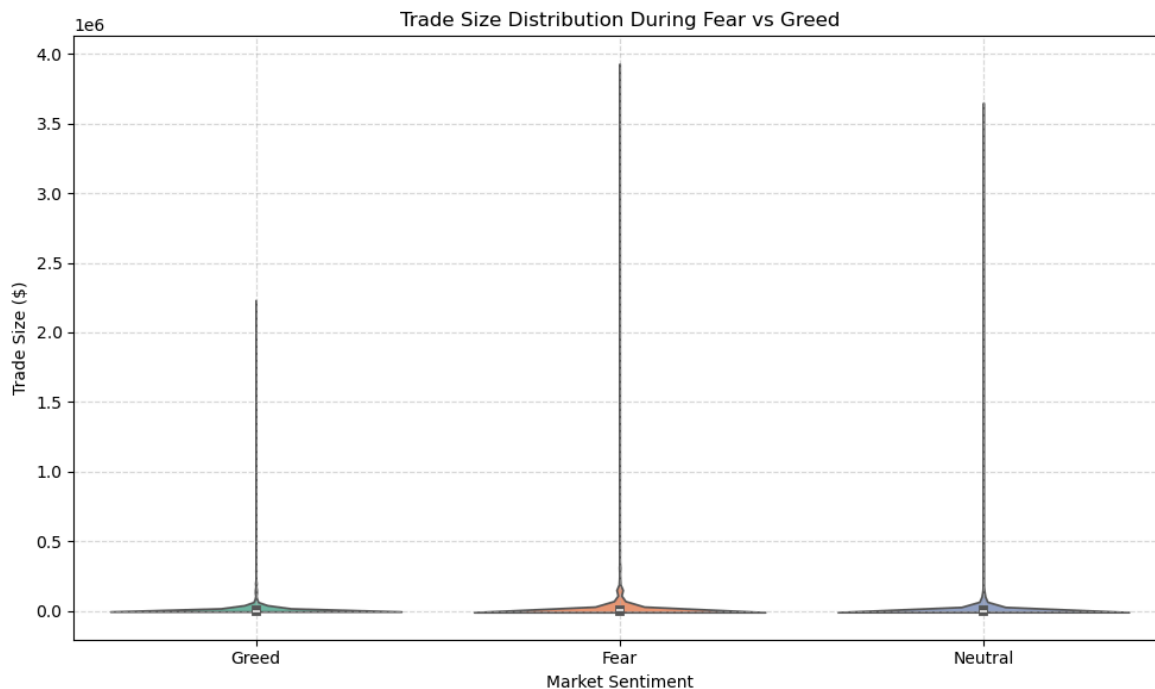


Insight:

HYPE, BTC, and @107 dominated trade volumes. Notably, even meme tokens like MELANIA and FARTCOIN were actively traded – showing risk appetite doesn't vanish in Fear.

5. Trade Size Distribution vs Sentiment

Were traders betting bigger during Greed?

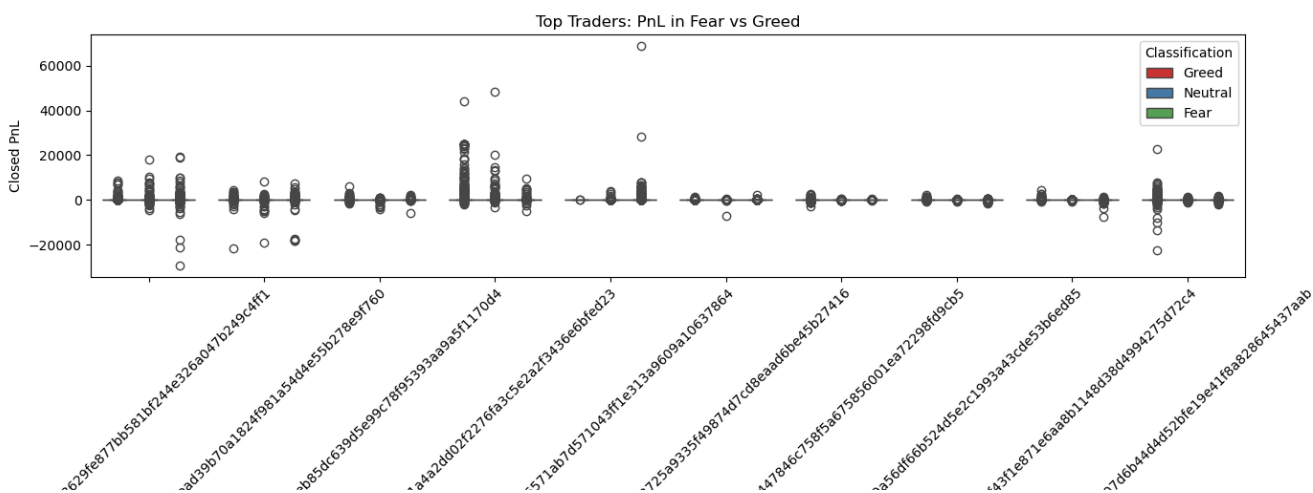


Insight:

While trade sizes stayed consistent overall, outliers were more extreme during Greed – indicating high-risk trades and whale activity.

6. Top Traders' Performance During Sentiment Phases

Do good traders care about market mood?



Insight:

Top-performing traders seemed less influenced by sentiment — delivering stable gains in both Fear and Greed zones. This shows experience often trumps emotion.

Key Takeaways

- Fear markets have higher volatility but also high profit potential
- Retail behavior (buy/sell) shifts noticeably with sentiment
- Greed brings in whales, FOMO, and large volume/speculative trades
- Top traders don't follow the crowd — they outperform across moods

Conclusion

This analysis proves that sentiment deeply impacts market behavior. But the smartest players use sentiment as a signal — not a rulebook. If integrated with trading strategies, this kind of insight can enhance decision-making, timing, and portfolio risk management.

About Me

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