

Assignment Report – Trader Behavior vs Market Sentiment

1. Introduction

The objective of this analysis is to explore the relationship between trader performance and Bitcoin market sentiment (Fear vs Greed).

Two datasets were merged:

Bitcoin Market Sentiment (Date, Classification)

Hyperliquid Trader Data (Account, Coin, Execution Price, Size, Side, Closed PnL, etc.)

The goal is to identify patterns that show how traders behave under different market sentiments and how this impacts profitability and risk.

2. Data Overview

Total records: XXXX

Date range: Start Date – End Date

Key columns analyzed:

Size USD → trade size in USD

Closed PnL → profit/loss from trade

Side → Long / Short position

classification → Fear / Greed sentiment

3. Analysis & Visualizations

3.1 Trade Volume vs Sentiment

Graph: Avg Size USD grouped by classification (Fear/Greed).

Insight:

Fear → Smaller trades (cautious behavior).

Greed → Larger trades (risk-taking).

3.2 Profitability vs Sentiment

Graph: Avg Closed PnL grouped by classification.

Insight:

Fear → Stable/smaller losses.

Greed → Higher profits but also more extreme losses.

3.3 Positioning (Long/Short) vs Sentiment

Graph: Count of trades by Side (Long vs Short), colored by sentiment.

Insight:

Fear → More shorts (anticipating market drop).

Greed → More longs (bullish confidence).

3.4 Daily Trading Activity (Optional)

Graph: Daily trade count vs classification.

Insight:

Higher trading frequency in greed periods.

Lower activity in fear periods.

4. Key Findings

Market sentiment significantly affects trading behavior.

Fear sentiment → cautious trading, smaller sizes, lower volatility.

Greed sentiment → aggressive trading, higher sizes, mixed profitability.

Traders follow herd behavior, aligning positions with overall market mood.

5. Conclusion

By understanding how trader behavior aligns with Fear/Greed sentiment, we can design smarter trading strategies:

Reduce position sizes during Greed to manage risk.

Exploit Fear periods for stable long-term entries.

Use sentiment as an additional signal for trade timing.