Trader Behavior Insights — Relationship Between Market Sentiment & Performance

Objective: Analyze how trader performance (PnL, trade size) varies with Bitcoin market sentiment (Fear, Greed, etc.) using Hyperliquid trade data and Fear & Greed Index.
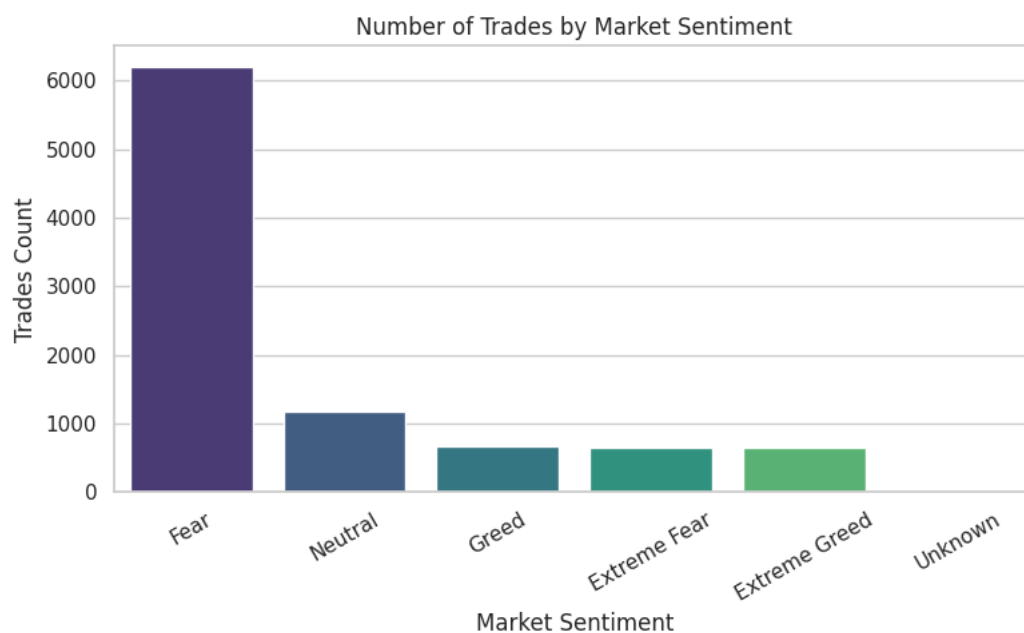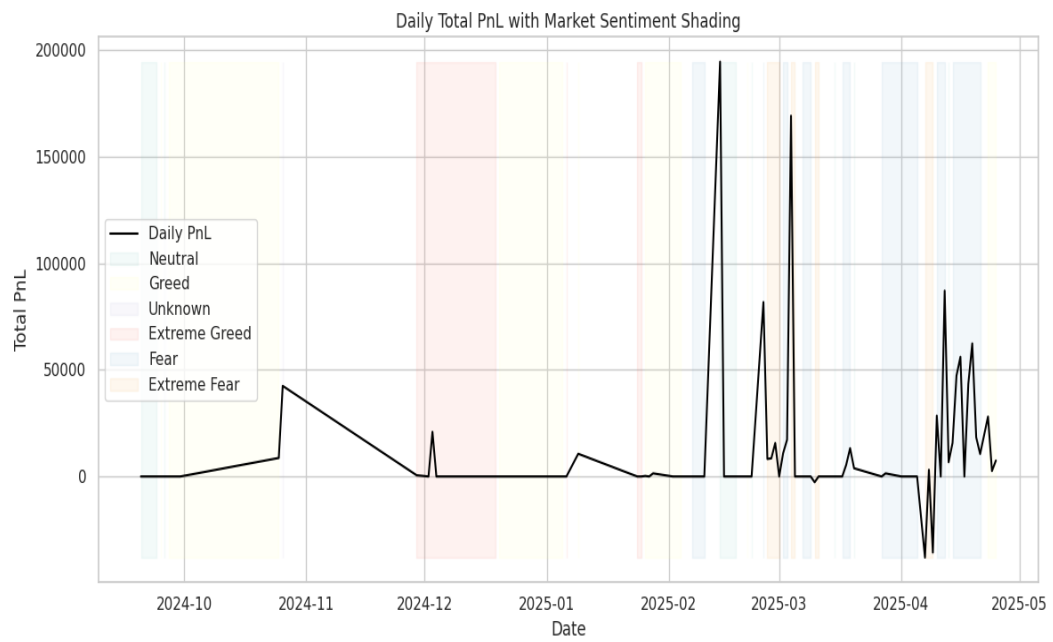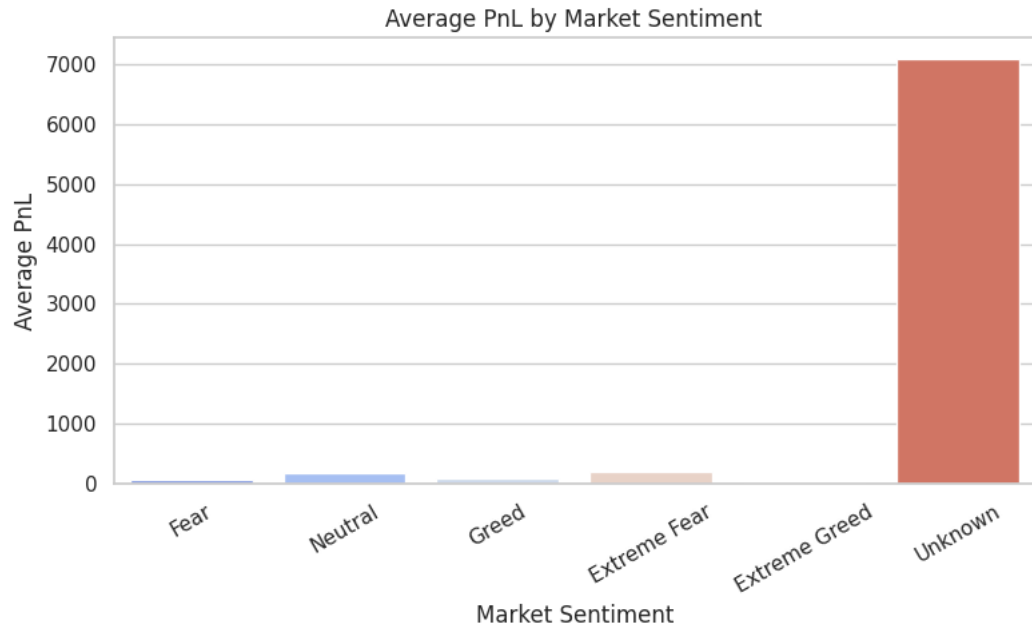
Data Overview:

Fear & Greed Index: 2644 rows, 4 columns. Sentiment categories: Fear, Extreme Fear, Neutral, Greed, Extreme Greed.
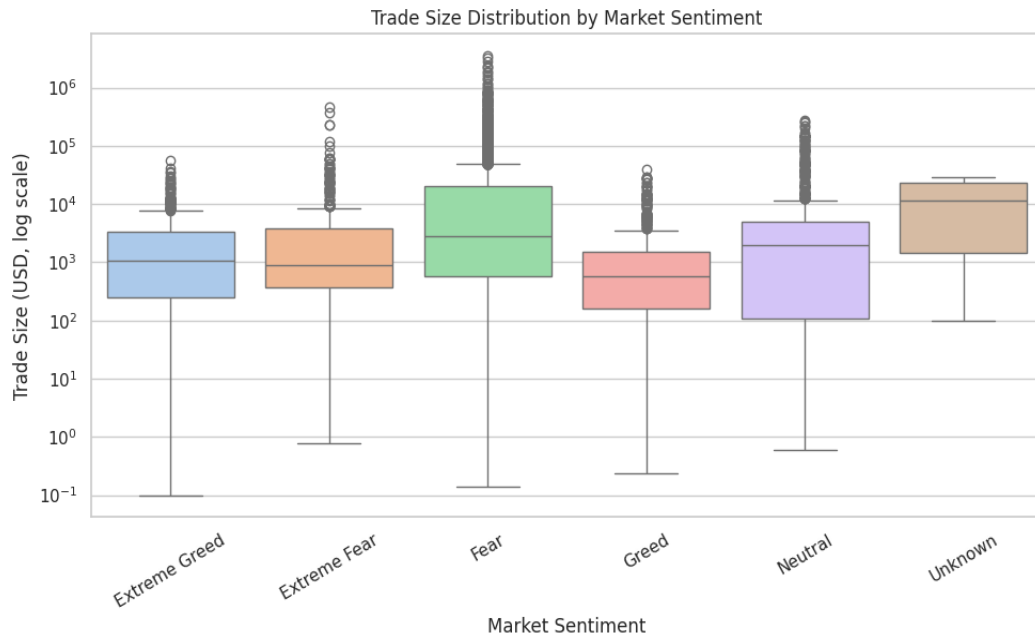Hyperliquid Trades: 9322 rows, 17 columns. Covers various coins, trade sizes, and timestamps.

Key Findings:

- Fear days have the highest trading activity but moderate average PnL.
- Neutral days see fewer trades but much higher average PnL, suggesting cautious but profitable trading.
- Extreme Greed shows low average PnL, possibly due to overconfidence.
- Trade sizes vary widely across sentiments, with some extremely large trades in Fear periods.

Number of Trades by Market Sentiment

Average PnL by Market Sentiment

Daily Total PnL with Market Sentiment Shading

Trade Size Distribution by Market Sentiment

Insights & Recommendations:

- Monitor sentiment shifts: sudden moves from Neutral to Fear/Greed may present profitable entry points.
- Avoid excessive leverage during Greed periods to prevent losses.
- Use sentiment as a filter to adjust position sizing.

Conclusion: Sentiment analysis provides valuable context for trader behavior. Integrating these insights into trading strategies could improve risk management and profitability.