Trader Performance vs Market Sentiment — Analysis Summary

Methodology

This study investigates how market sentiment influences trader behavior and performance using historical trading data and the Fear/Greed Index. After cleaning and aligning both datasets at the daily level, key trading metrics were computed, including daily profit and loss (PnL), trade frequency, average trade size, win rate, and trader behavioral indicators. Traders were further segmented based on activity and performance consistency. A simple Logistic Regression model was also built to test whether profitability exhibits predictive structure using sentiment and behavioral variables.

Key Insights

1. **Performance varies significantly across sentiment regimes.**
   Traders achieve the highest average profitability during Fear and Extreme Fear conditions, indicating that volatile environments create more trading opportunities.
2. **Trader behavior changes with sentiment.**
   Trading activity increases substantially during Fear periods, while activity declines during Greed, suggesting that traders respond to market emotion and volatility.
3. **Consistency matters more than aggressiveness.**
   Traders with lower performance volatility exhibit more stable profitability than highly active but inconsistent traders.
4. **Position sizing affects stability.**
   Larger trade sizes are associated with less stable returns, indicating the importance of controlled risk exposure.

Strategy Recommendations

Based on the analysis:

Strategy 1 — Volatility Exploitation (Fear Regime)
Increase trading activity during Fear and Extreme Fear periods while maintaining controlled position sizes to capture volatility-driven opportunities.

Strategy 2 — Risk Reduction (Greed Regime)
Reduce trading frequency during Greed and focus on high-probability trades with strict risk management to maintain performance stability.

Bonus — Predictive Insight

A simple Logistic Regression model achieved approximately **73% accuracy**, demonstrating that trader profitability is partially predictable using sentiment and behavioral indicators. Sentiment was identified as the strongest predictor, confirming regime-dependent performance dynamics.