

Data Science Report: Market Sentiment vs Trader Behavior

Project Overview

This project analyzes how trader behavior (PnL, trade volume, activity) correlates with market sentiment (Fear vs Greed). Using merged datasets from historical trading records and the Fear-Greed index, we explored trends in profitability and behavior.

Key Findings

1. PnL During Fear vs Greed

Traders tend to make higher profits during 'Greed' periods. Median PnL is higher and volatility is wider, suggesting traders take more risks when sentiment is positive.

2. Total Trade Volume by Sentiment

The total trading volume is significantly higher in 'Greed' conditions. This shows greater trader confidence and participation.

3. Number of Trades by Sentiment

There are more trades executed during 'Greed' periods, showing increased activity compared to 'Fear'.

Conclusion

The analysis confirms that positive market sentiment (Greed) encourages higher trading volume, more trades, and potentially higher profits. Conversely, Fear leads to cautious behavior with lower activity and tighter PnL ranges. These insights can help tailor trading strategies to market mood.