

Data Science Report

Project Title: Analysis of Trader Behavior vs Market Sentiment

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■ Summary of Analysis

This analysis explores the relationship between trader behavior and market sentiment (Fear vs Greed) using

- historical_data.csv (trader transactions)
- fear_greed_index.csv (daily sentiment)

The two datasets were merged by date, and metrics like profit (closedPnL) were analyzed against market

■ Key Insights

1. Profitability Trends by Sentiment

Traders made significantly higher profits during “Greed” days compared to “Fear” days. This indicates that

2. Volume & Sentiment (Optional)

Trade volume was slightly higher during “Greed” phases. Traders appear more confident and active when

3. Side Analysis (Optional)

Long positions were more frequent during Greed periods. Fear periods saw a more balanced or defensive

■ Visualization

Total Profit by Market Sentiment

Saved as: outputs/profit_by_sentiment.png

This bar chart clearly shows that cumulative profits are greater when the market is in a 'Greed' state.

■ Conclusion

This analysis shows that market sentiment significantly influences trading behavior, especially profitability.