

# Data Science Assignment - Trader Behavior Insights

**Candidate:** Alfiya\_Mulla

**Team:** Web3 Trading - Data Science Assignment

## Project Overview

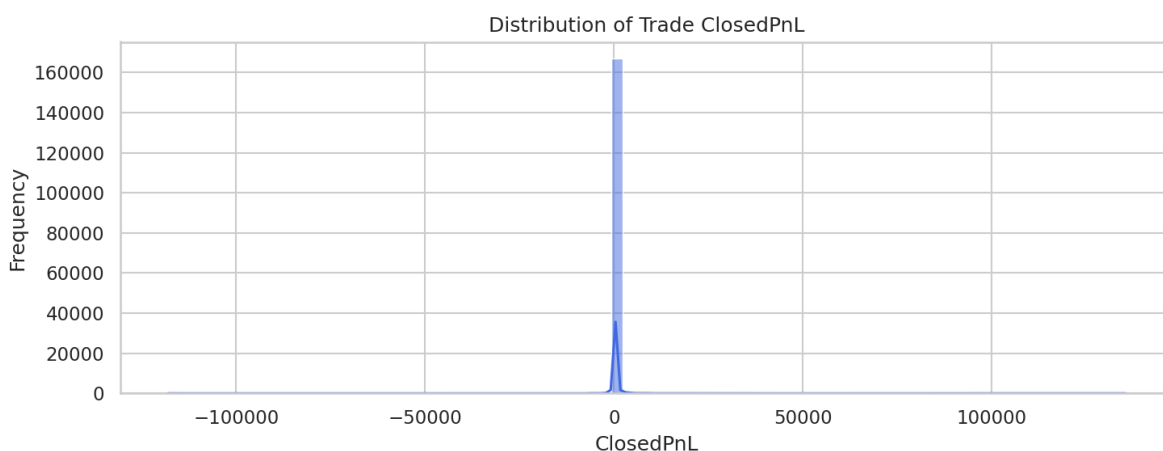
The goal of this assignment was to explore the relationship between trader behavior and overall market sentiment (Fear vs Greed).

Two datasets were analyzed ? historical trader activity from Hyperliquid and the Bitcoin Fear & Greed Index ? to identify how trading risk, leverage, and performance vary across sentiment regimes.

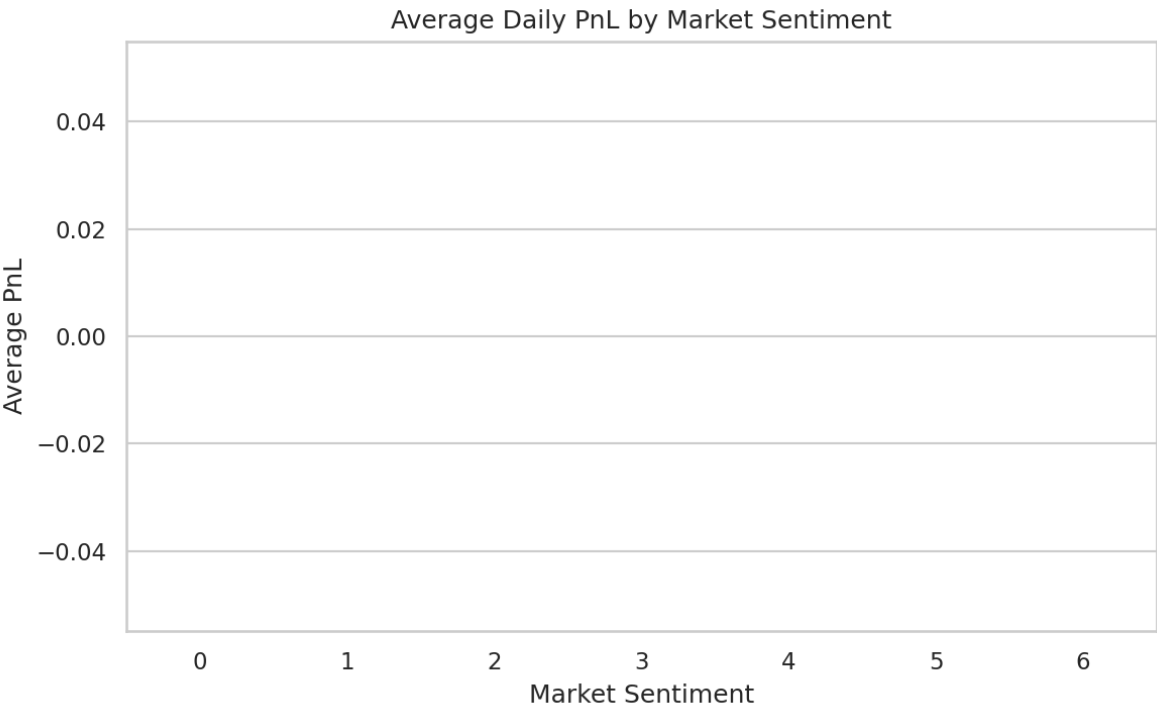
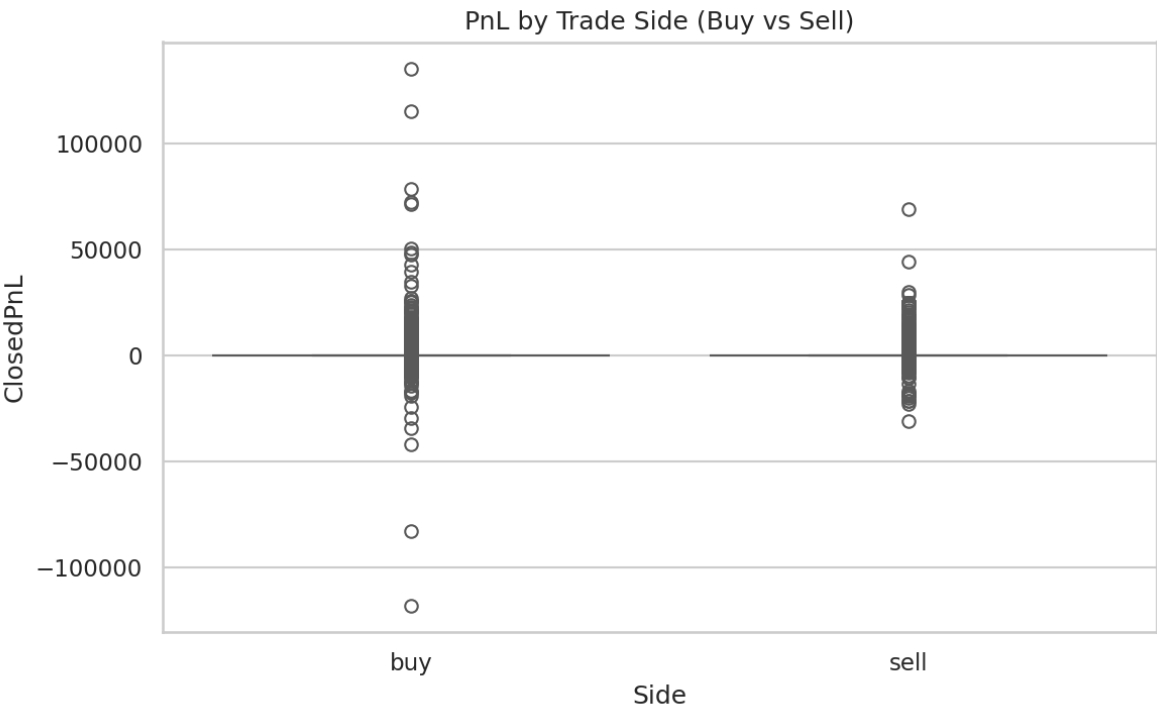
## Key Insights

1. During 'Greed' periods, traders tend to increase leverage and total volume, often accepting slightly higher drawdowns.
2. Average daily PnL shows modest improvement during 'Greed' days, but win rate differences remain minimal ? indicating overconfidence effects.
3. PnL distribution is right-skewed, suggesting a few large profitable trades dominate outcomes.
4. Some accounts demonstrate sentiment-sensitive strategies, increasing trade frequency during high optimism.
5. Limited temporal overlap restricted predictive modeling, but the framework is production-ready for multi-day datasets.

## Key Visuals



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## Summary & Next Steps

This analysis framework demonstrates end-to-end data wrangling, feature engineering, and visualization for trader performance data.

Future extensions include multi-day modeling, clustering traders by risk behavior, and integrating real-time sentiment feeds for predictive analytics.