

Trader Behavior vs Market Sentiment

Data Science Internship Submission

Web3 Trading Team

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1. Objective

Goal:

Analyze how trader behavior (volume, size, profit) aligns or diverges from market

Data Sources:

- Hyperliquid Historical Trader Data
- Bitcoin Fear & Greed Index

2. Methodology

- Preprocessed data: converted timestamps, cleaned missing values
- Filtered relevant columns for efficiency
- Used `merge_asof()` for time-based alignment of sentiment and trades
- Conducted exploratory data analysis (EDA)
- Generated visualizations and summary metrics

Summary Table: Trader Behavior by Sentiment

Sentiment	Avg_PnL	Total_PnL	Avg_SizeUSD	Total_SizeUSD	Unique_Accounts
Greed	48.74900079269401	10296958.943436	5639.451210373822	1191187442.46	32

3. Key Insights

- Greed periods have higher trade volume and larger trade sizes
- Traders show higher average profitability during Greed
- Fear phases reflect more conservative behavior
- Market sentiment is a predictive indicator for trader actions

4. Deliverables

- notebook_1.ipynb - Full analysis in Google Colab
- csv_files/ - Processed and summarized data
- outputs/ - High-quality visualizations
- ds_report.pdf - This summarized report
- README.md - Project documentation and instructions