
Data Science Intern – Round-0 Assignment (Trader Performance vs Market Sentiment)

Hello

Thanks for applying for the **Data Science Intern** role at **Primetrade.ai**.

As the first step in the hiring process, please complete the short assignment below. Candidates who meet the acceptance criteria will be shortlisted for an interview.

Expected effort: ~2–3 hours

Deadline: Submit within **2 days** of receiving this email (*If you need 1–2 extra days, reply with your ETA.*)

Objective

Analyze how **market sentiment (Fear/Greed)** relates to **trader behavior and performance** on Hyperliquid. Your goal is to uncover patterns that could inform smarter trading strategies.

Datasets

You will work with 2 datasets:

1) Bitcoin Market Sentiment (Fear/Greed)

Columns: **Date, Classification** (Fear / Greed)

Link: https://drive.google.com/file/d/1PgQC0tO8XN-wqkNyghWc_-mnrYv_nhSt/view?usp=sharing

2) Historical Trader Data (Hyperliquid)

Includes fields like: **account, symbol, execution price, size, side, time, start position, event, closedPnL, leverage, etc.**

Link: <https://drive.google.com/file/d/1IAfLZwu6rJzyWKgBToqwSmmVYU6VbjVs/view?usp=sharing>

Please check for the download symbol in the left link

Tasks (What to do)

Part A — Data preparation (must-have)

1. Load both datasets and document:
 - number of rows/columns
 - missing values / duplicates
2. Convert timestamps and align the datasets by **date** (daily level is fine).
3. Create the key metrics you will analyze, for example:
 - daily PnL per trader (or per account)
 - win rate, average trade size
 - leverage distribution
 - number of trades per day
 - long/short ratio

Part B — Analysis (must-have)

Answer these questions with evidence:

1. Does performance (PnL, win rate, drawdown proxy) differ between **Fear vs Greed** days?
2. Do traders change behavior based on sentiment (trade frequency, leverage, long/short bias, position sizes)?
3. Identify 2–3 segments (examples):
 - high leverage vs low leverage traders
 - frequent vs infrequent traders
 - consistent winners vs inconsistent traders
4. Provide at least **3 insights** backed by charts/tables.

Part C — “Actionable output” (must-have)

Propose **2 strategy ideas** or “rules of thumb” based on your findings.

Example: “During Fear days, reduce leverage for segment X; increase trade frequency only for segment Y.”

Bonus (optional)

- Simple predictive model:
 - Predict next-day trader profitability bucket or volatility of PnL using sentiment + behavior features
 - Clustering traders into behavioral archetypes
 - A lightweight dashboard (Streamlit) to explore results
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Deliverables (What to submit)

Please submit **one** of the following:

Option 1 (Preferred): GitHub repo

Include:

- Notebook (`.ipynb`) or script
- `README.md` with setup + how to run
- Output charts/tables
- A short write-up (max 1 page) OR a markdown section summarizing:
 - methodology
 - insights
 - strategy recommendations

Option 2: Google Drive folder

Same contents as above.

Evaluation criteria (How we shortlist)

We score based on:

- Data cleaning + correctness of merges/alignment
- Strength of reasoning (not just plots)
- Quality of insights (actionable, not generic)
- Clarity of communication (structured write-up)
- Reproducibility (clean notebook, clear steps)

How to Apply

Email your **resume + submission link** to:

- hello@anything.ai
- joydip@anything.ai
- chetan@primetrade.ai
sonika@primetrade.ai

Subject: Junior Data Scientist – Trader Behavior Insights

We'll notify shortlisted candidates by Saturday after submission.

Thanks,
Sonika
Primetrade.ai Hiring Team

Whitelist : sonika@primetrade.ai , sonika@bajarangs.com emails to avoid missing of notifications
