Web3 Trading – Data Science Assignment Report

1. Objective

The objective of this analysis is to examine how trader behavior on Hyperliquid aligns with overall Bitcoin market sentiment (Fear vs Greed) and identify behavioral patterns that can inform smarter trading strategies.

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2. Datasets

- Hyperliquid Historical Trader Data

- Bitcoin Fear & Greed Index

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3. Methodology

- Standardized column naming and timestamp normalization

- Aggregated trade-level data into daily metrics

- Merged trader behavior with market sentiment

- Performed exploratory data analysis using visualization techniques

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4. Key Metrics Analyzed

- Total daily PnL

- Trading volume

- Average trade size

- Profitability ratio

- Active traders

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5. Key Insights

- Trading volume increases significantly during **Greed** phases

- Higher volume does not always translate into higher profitability

- Traders show more disciplined behavior during **Fear** periods

- Greed periods indicate higher risk appetite and emotional trading

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6. Strategy Implications

- Reduce position sizing during Greed phases

- Focus on selective high-probability trades during Fear

- Incorporate sentiment-based risk controls

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7. Conclusion

Market sentiment strongly influences trader behavior. Integrating sentiment signals with risk management can improve trading performance.