Impact of Market Sentiment on Crypto Trader Performance

1.Introduction:

Cryptocurrency markets are highly influenced by emotions such as fear and greed. When the market is fearful, traders tend to panic, while during greed, traders become more confident and aggressive. The Bitcoin Fear and Greed Index captures this overall market mood and classifies it into five categories: Extreme Fear, Fear, Neutral, Greed, and Extreme Greed.

In this project, I studied how real traders behave under these different market conditions. The goal was to understand how profit, trading activity, and winning chances change when the market shifts from fear to greed.

2. Datasets Used:

Two datasets were used for this analysis.

The first dataset is the Bitcoin Fear and Greed Index, which contains the date and the market sentiment for that day (such as Fear, Greed, or Extreme Greed). It represents how the overall crypto market is feeling.

The second dataset is Hyperliquid trader data, which contains real trading records of crypto traders. It includes information such as trader account, trade size, price, profit or loss, and trade time.

These two datasets together allow us to study how traders perform when the market sentiment changes.

3. Methodology:

First, the trade timestamps were converted into daily dates so that each trade could be matched with the market sentiment of that day. Then the trader dataset was merged with the Fear and Greed dataset using the date.

After merging, new useful columns were created:

- Profit from the Closed PnL
- Trading volume from the USD size of the trade
- Win indicator, which shows whether a trade was profitable

The merged data was then grouped by market sentiment to compare profit, win rate, and trading activity across different market conditions.

4. Key Findings:

The analysis showed clear differences in trader performance across different market sentiments.

When the market was in Extreme Greed, traders achieved the highest average profit and the highest win rate. This indicates that strong bullish sentiment creates favorable trading conditions.

During Fear, trading volume was high, but the win rate was much lower. This suggests that traders trade more during fearful periods, but often make poor decisions due to panic or emotional pressure.

Extreme Fear was the worst market condition. Traders made almost no profit and the win rate was the lowest. This reflects panic selling and uncertainty.

Greed and Neutral markets showed moderate and stable performance compared to extreme conditions.

5. Trading Insights:

The results show that market sentiment plays a major role in trading success.

- In Extreme Greed, traders can take advantage of strong market trends.
- In Fear, traders should reduce risk and avoid emotional overtrading.
- In Extreme Fear, it is safer to stay out of the market or trade very carefully.

Some traders were found to perform well even during Fear, which suggests that disciplined and contrarian strategies can be profitable.

6. Conclusion:

This project clearly shows that trader performance is closely linked to market sentiment. By combining Fear and Greed data with real trading records, we can better understand when trading is most profitable and when it is risky.

Using sentiment-based analysis can help traders make smarter decisions, manage risk better, and improve overall performance in crypto markets.