TRADER BEHAVIOUR INSIGHTS USING FEAR AND GREED INDEX

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1.Objective

The objective of this project is to analyze the relationship between Bitcoin market sentiment (Fear and Greed Index) and trader behavior.

The analysis focuses on understanding how market sentiment influences profitability, trade direction, and risk exposure.

2.Data Description

1.Bitcoin Fear and Greed index dataset:

Contains daily market sentiment classified as Fear, Greed, or Neutral

2.Historical Trader Data:

Contains individual trade records including execution price, trade size, trade direction(Buy/Sell),timestamp, and closed profit/loss(Closed PnL).

3.Methodology

The analysis was performed using Python in Google Colab.

Data cleaning involved parsing timestamp columnsand aligning both datasets by date. The datsets were merged using the trade

date to associate each trade with the corresponding market sentiment.

Exploratory data analysis was conducted to evaluate:

- Average closed profit/loss across sentiment categories
- Buy or sell trade behavior under different market conditions
- Trade size(USD) as a proxy for risk exposure

4.Key Insights

1. Trades executed during Greed periods show higher average profits, indicating increased trader confidence in bullish markets.
2. Fear-dominated periods are associated with higher losses, suggesting panic-driven or defensive trading behavior.
3. Buy trades are more frequent during Greed periods, while Sell trades increase during fear conditions.
4. Although explicit leverage data was unavailable, larger average trade sizes during Greed suggest higher risk-taking behavior.

5.Conclusion

The analysis demonstrates that market sentiment plays a significant role in influencing trader behavior and performance. Incorporating sentiment indicators such as the Fear and Greed Index can help traders and platforms better understand risk taking patterns and improve trading strategies

6.Tools Used

- Python
- Pandas
- Matplotlib
- Seaborn
- Google Colab