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Submission Folder: ds_anshul
Colab Link: [*analysis.ipynb - Colab*]

1. Objective

This analysis explores how trader behavior — including profitability, trade direction, and risk exposure — varies across different market sentiment conditions (Fear, Greed, Neutral, etc.). The goal is to uncover behavioral patterns and strategic tendencies that emerge under emotional market states.

2. Data Sources

- trader_data.csv: Contains individual trade records including PnL, trade size, fees, and direction.
- sentiment_data.csv: Daily market sentiment classification (e.g., Fear, Greed).

3. Methodology

- Cleaned and standardized column names
- Parsed timestamps and aligned trade dates with sentiment dates
- Merged datasets on date
- Grouped and analyzed trades by sentiment classification
- Visualized PnL distribution and trade direction
- Summarized average trade size and fees

4. Key Findings

 Trader Profitability by Sentiment

 Traders perform best during **Extreme Greed**, while **Greed** and **Fear** carry high volatility and risk.

 Trade Side Distribution

 SELL trades dominate during Fear and Extreme Fear, while BUY trades rise during Greed and Extreme Greed.

 Average Trade Size and Fees

 Traders risk more and pay higher fees during Fear and Greed, suggesting aggressive strategies.

5. Visuals

Include the following charts from your outputs/ folder:

- pnl_by_sentiment.png: Scatter plot of PnL distribution
- trade_side_by_sentiment_annotated.png: Bar chart with trade counts and annotations

6. Conclusion

Market sentiment significantly influences trader behavior.

- **Extreme Greed** drives profitability
- **Fear** triggers high-volume, high-risk trading
- **Neutral** sentiment leads to cautious, consistent strategies
- **Greed** is deceptive — high volatility with lower returns

These insights can inform trading strategies, risk management, and behavioral modeling in Web3 markets.

Let me know if you want help formatting this in Google Docs or Colab — once pasted and exported, you’ll have a clean, professional ds_report.pdf ready for submission!