



# Trader Behavior Insights – Final Report

## 1. Objective

To analyze how trader behavior (profitability, volume) is influenced by market sentiment using historical trade data and the Bitcoin Fear & Greed Index.

## 2. Data Sources

-  historical\_data.csv: Trade records with execution info, PnL, volume, etc.
-  fear\_greed\_index.csv: Daily sentiment (Fear/Greed)

## 3. Methodology

- Converted timestamps and aligned both datasets by date
- Merged trader logs with sentiment labels
- Performed group-level analysis and visualization

## 4. Key Insights

- **Average Closed PnL** was higher during **Greed** periods
- **Lower profitability** seen during **Fear** periods
- **Trade volume** peaked during **Greed**, indicating higher risk-taking

## 5. Charts

- *Average PnL by Sentiment*: outputs/avg\_pnl\_by\_sentiment.png
- *Trade Volume by Sentiment*: outputs/volume\_by\_sentiment.png
- *Correlation Heatmap*

## **6. Conclusion**

The results suggest traders perform better and take more aggressive positions during Greed-driven markets. Dynamic trading strategies that account for sentiment could improve decision-making.

### **Google Colab Link :**

<https://colab.research.google.com/drive/1pl-14K4ctVST6WXLfplovoPKBFj0o2en?usp=sharing>