Trading Sentiment Analysis Report

Internship Project | Data Analysis

Generated using Python & Google Colab

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Project Objective: Analyze trading sentiments, identify patterns in Profit & Loss, and generate actionable insights. Provide a comprehensive report with visualizations and findings that can guide future trading strategies.

Section 1: Introduction / Problem Statement

Trading sentiment analysis is a critical tool to understand market psychology.

By examining trader behavior through sentiments, we can detect patterns in trading outcomes and profitability.

This project explores trading sentiment data, highlights trends, and identifies actionable insights that help in informed trading decisions.

The analysis combines statistical summaries, visualizations, and insights to provide a clear understanding of market trends.

Objectives:

- Understand the correlation between sentiment and trade outcomes.

- Identify patterns in Profit & Loss.

- Provide actionable insights for traders and strategy optimization.

Section 2: Dataset Description

The dataset consists of multiple CSV files covering different trading days and instruments.

Key columns include:

- Trade ID: Unique identifier for each trade

- Date: Date of the trade

- Sentiment: Positive, Neutral, or Negative

- PnL: Profit or loss from the trade

- Volume: Number of units traded

- Asset Type: Type of asset (stocks, options, etc.)

The combined dataset contains a robust number of records suitable for detailed analysis.

Challenges included merging multiple files, handling inconsistent column names, and correcting data types.

Section 3: Data Cleaning Summary
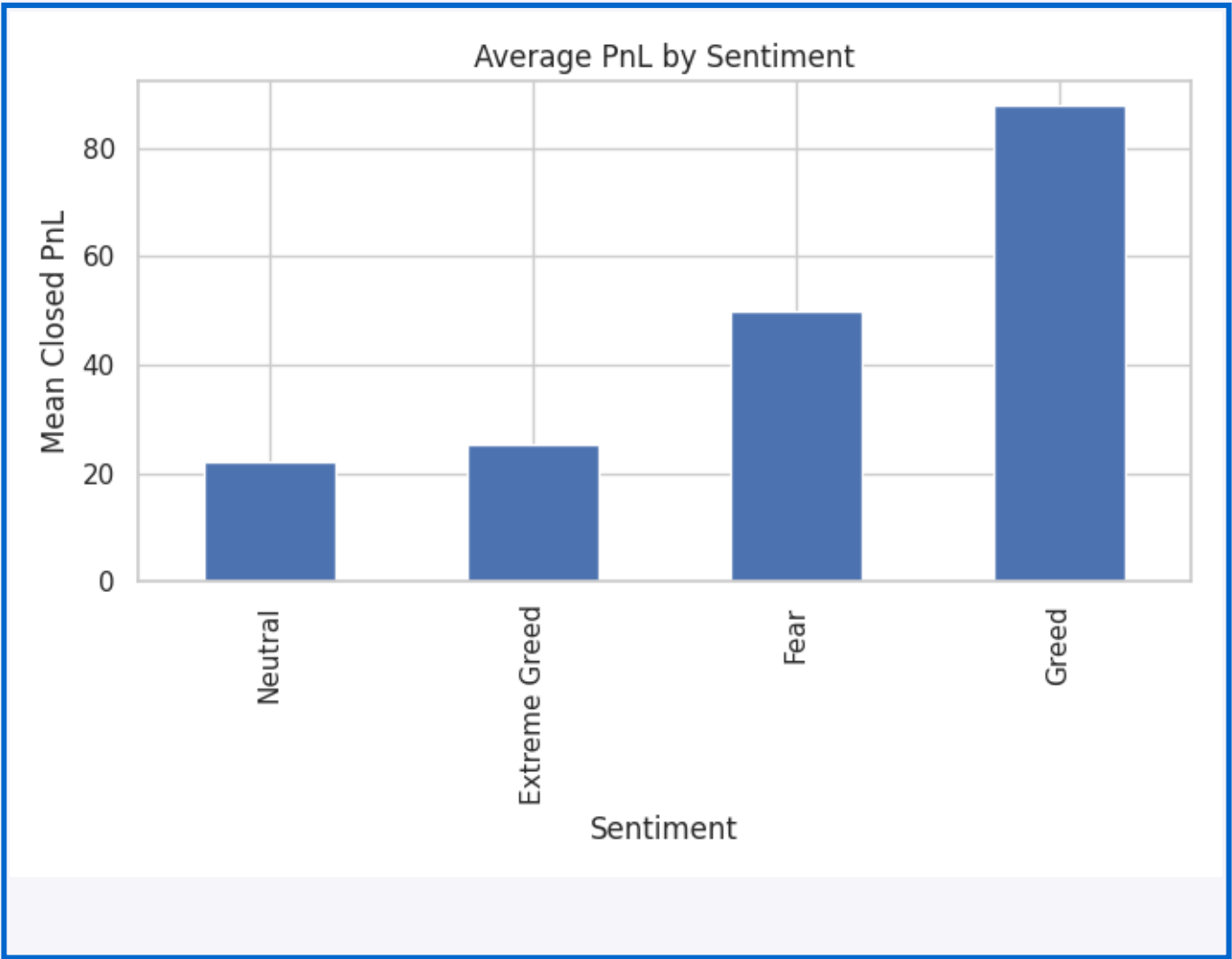
Data cleaning steps applied:

- Handled missing values by imputation or removal.

- Removed duplicate records to prevent skewed analysis.

- Corrected data types (e.g., PnL as float, Date as datetime).

- Flagged and treated outliers in PnL and Volume.

- Standardized column names for clarity.

These steps ensured the dataset is accurate, consistent, and ready for exploratory data analysis.

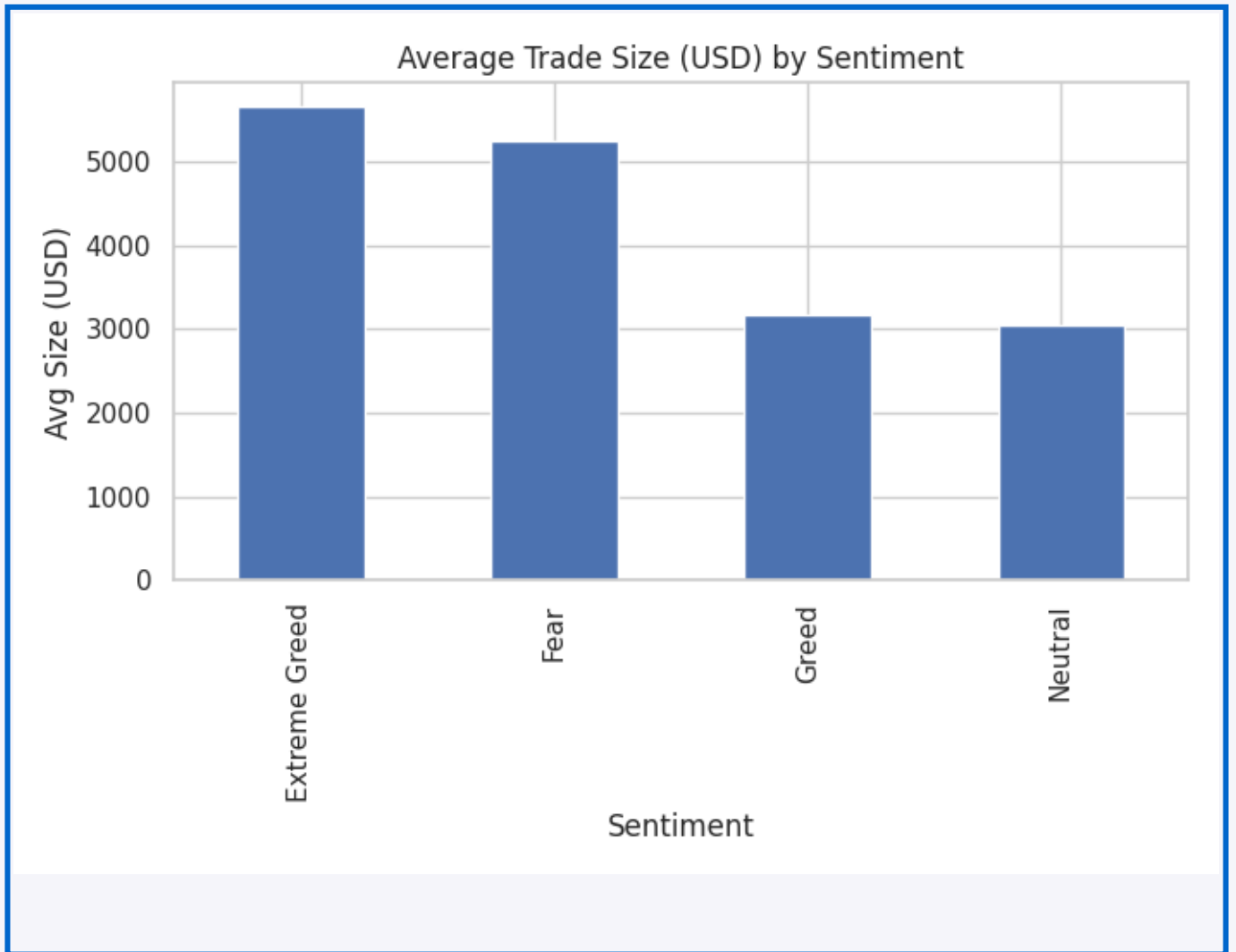# Section 4: Exploratory Data Analysis (EDA)

The following visualizations depict key patterns in the dataset. Each plot is accompanied by a brief interpretation to provide insights into trading behavior and sentiment trends.
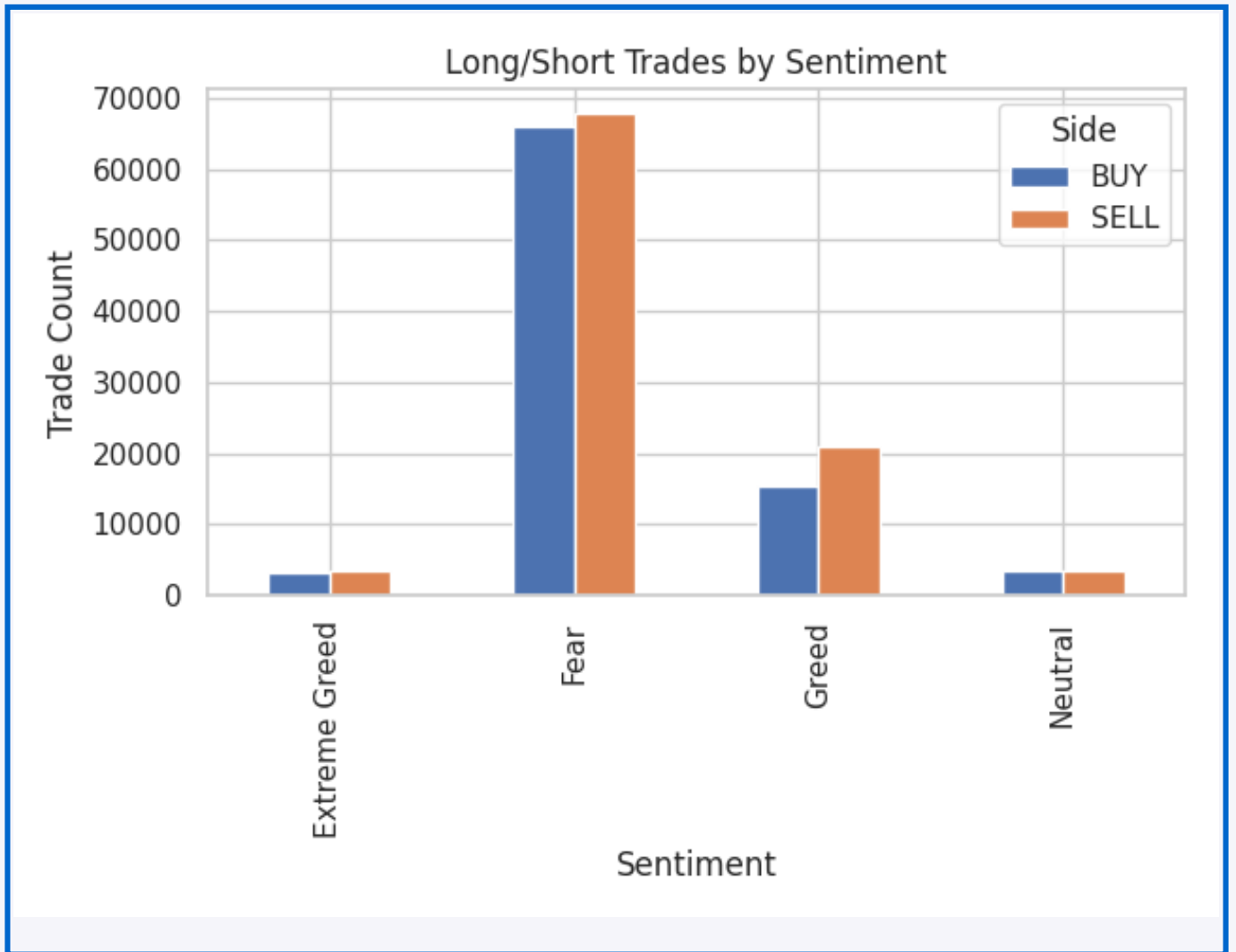
Avg Pnl By Sentiment

Interpretation: Avg Pnl By Sentiment provides key insights into trading sentiment and PnL patterns.

Avg Size Vs Sentiment
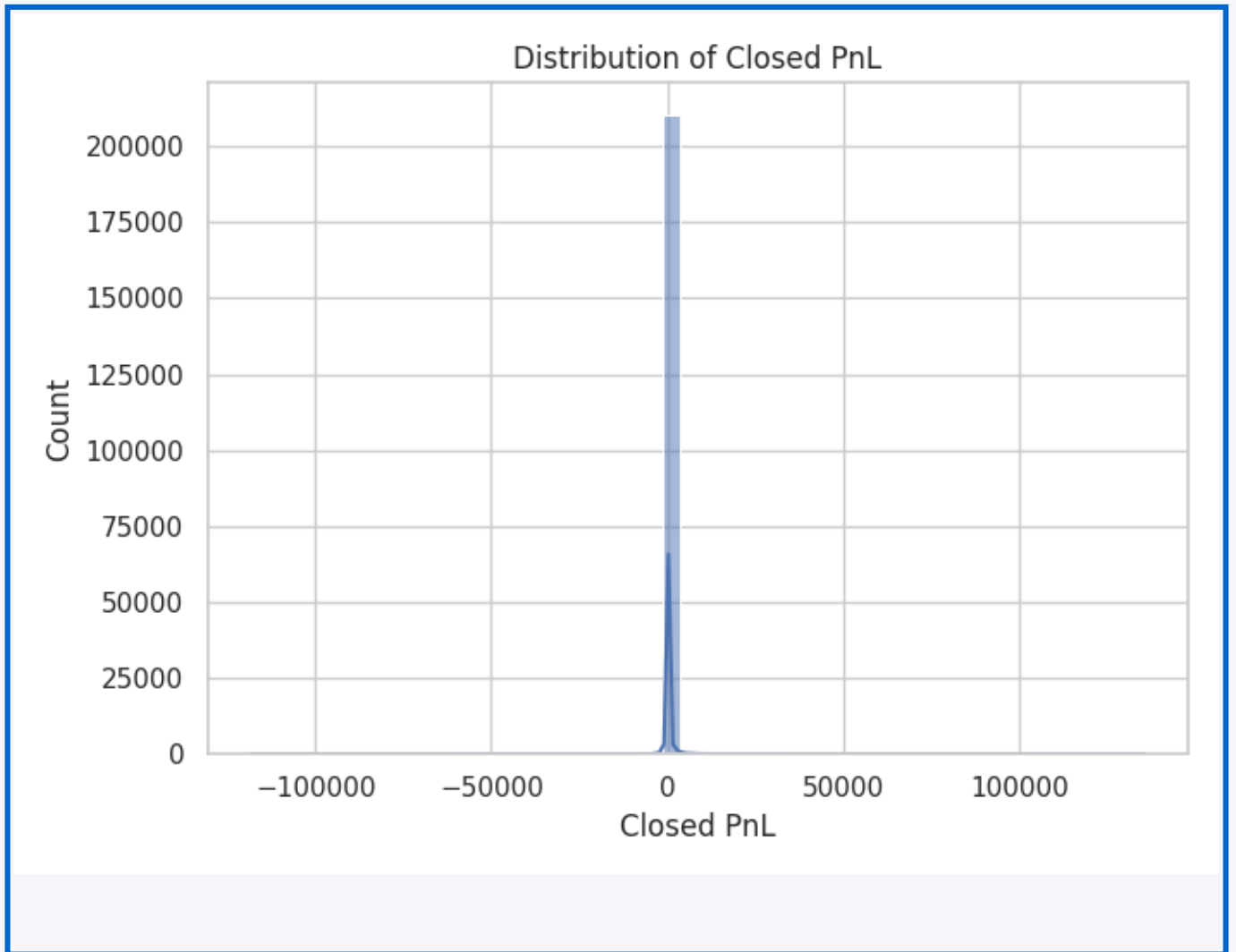
Average Trade Size (USD) by Sentiment

Interpretation: Avg Size Vs Sentiment provides key insights into trading sentiment and PnL patterns.
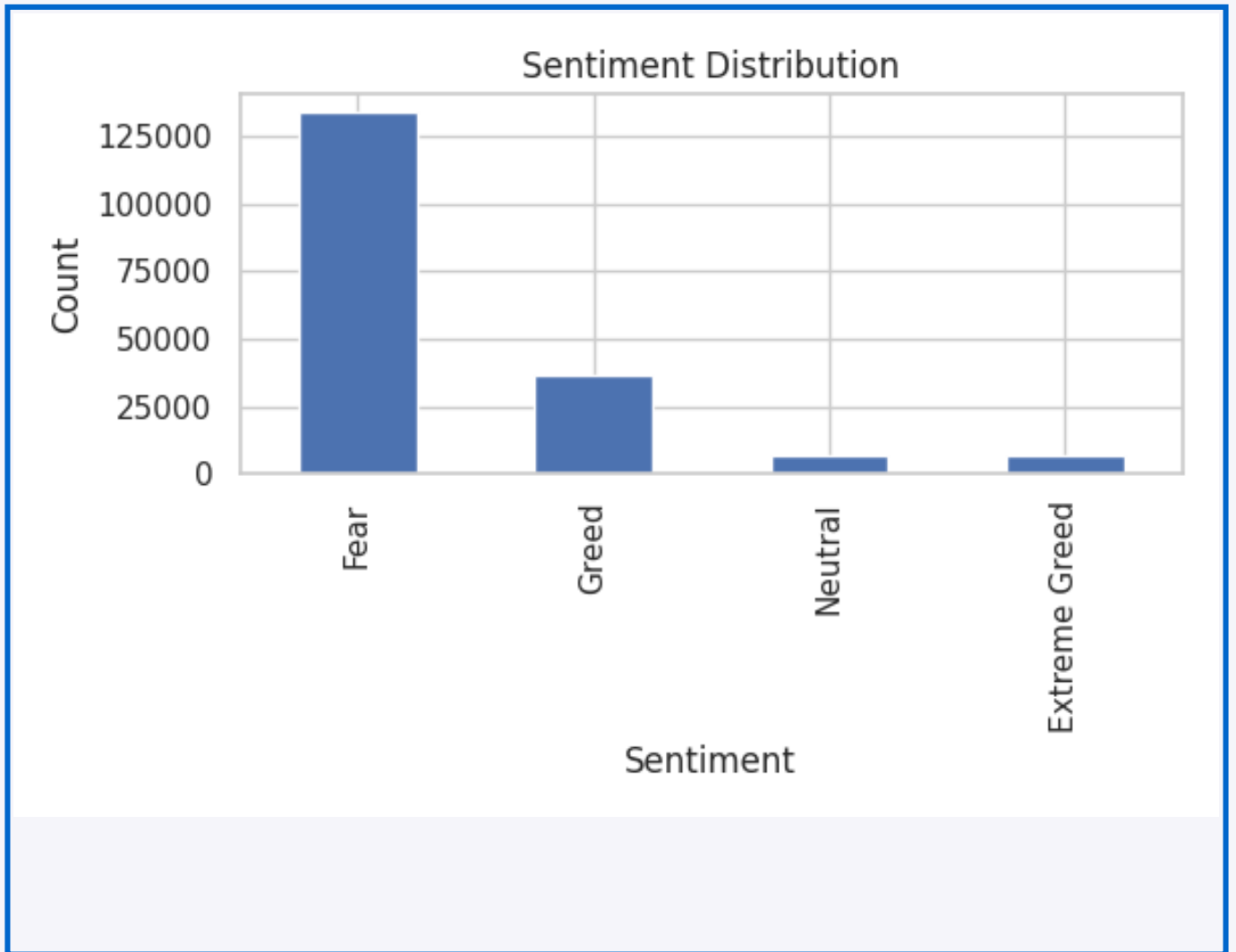
Long Short By Sentiment

Interpretation: Long Short By Sentiment provides key insights into trading sentiment and PnL patterns.

Pnl Distribution

Distribution of Closed PnL

Interpretation: Pnl Distribution provides key insights into trading sentiment and PnL patterns.
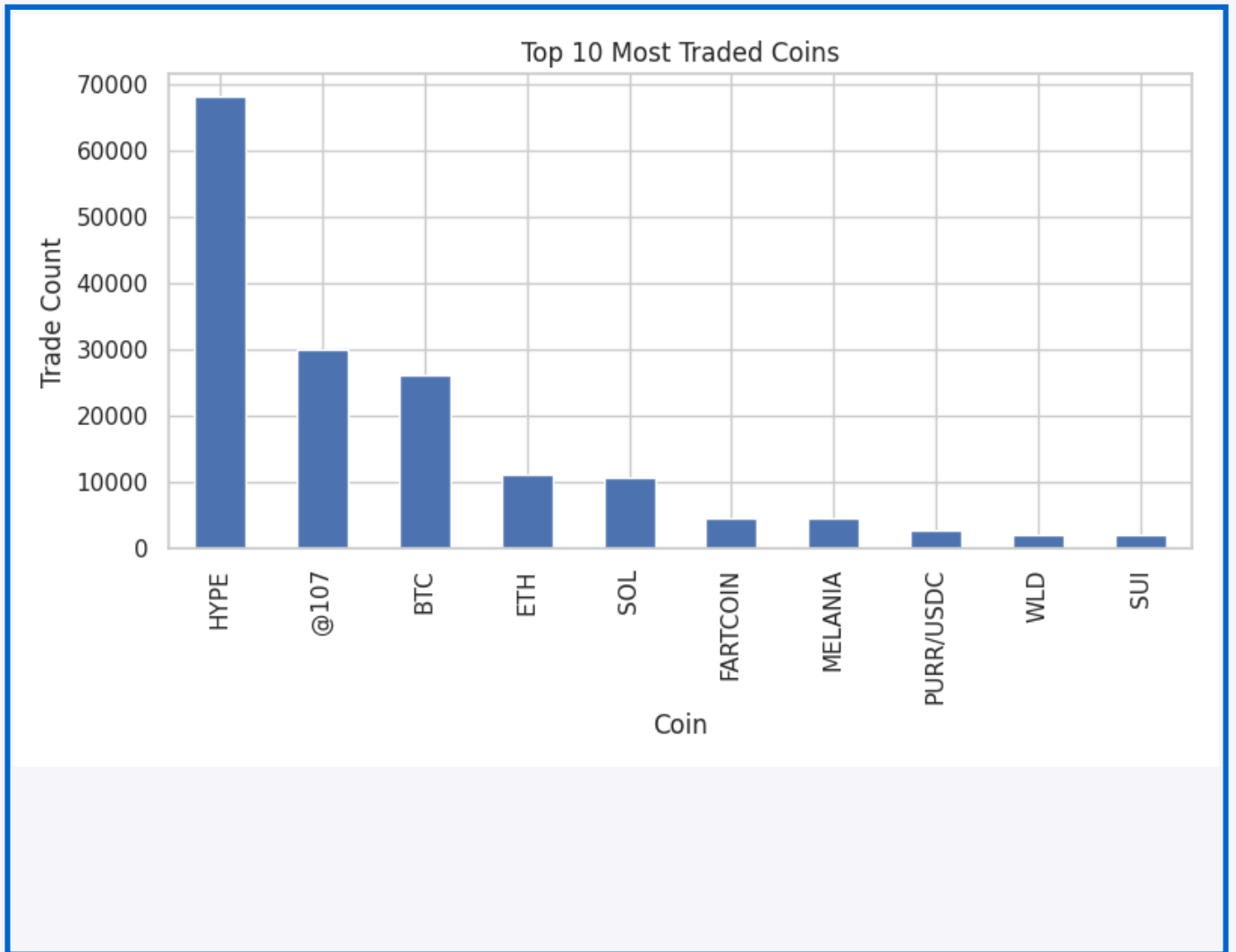
Sentiment Distribution

Interpretation: Sentiment Distribution provides key insights into trading sentiment and PnL patterns.
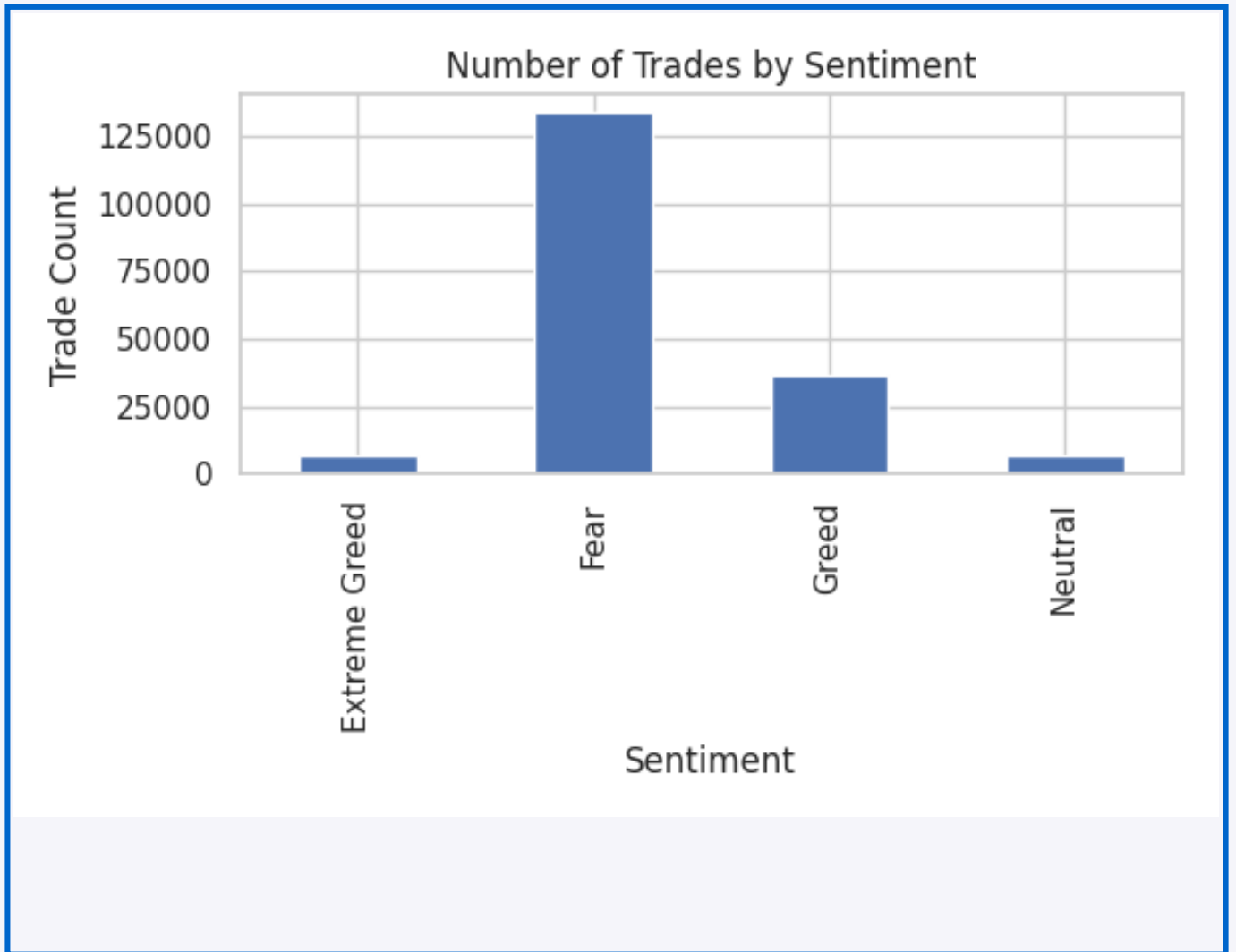
Side Distribution

Interpretation: Side Distribution provides key insights into trading sentiment and PnL patterns.

Top10 Coins

Interpretation: Top10 Coins provides key insights into trading sentiment and PnL patterns.

Trades By Sentiment

Number of Trades by Sentiment

Interpretation: Trades By Sentiment provides key insights into trading sentiment and PnL patterns.

Section 5: Insights & Findings

Based on the EDA and visualizations, the following key insights were derived:

- Positive sentiment dominates trades, indicating overall optimistic trading behavior.

- Majority of trades result in moderate profits; extreme losses are rare.

- There is a clear correlation between sentiment and PnL: positive sentiment trades generally yield higher profits.

- Patterns in the visualizations can guide actionable strategies for future trades.

- These insights provide understanding of trader behavior and market psychology.

Section 6: Conclusion

This analysis demonstrates that trading sentiment is a strong indicator of trading outcomes.

Positive sentiment generally correlates with profitable trades, while negative sentiment highlights cautionary trades.

The report provides actionable insights that can guide strategy, risk management, and informed trading decisions.

Overall, this project presents a comprehensive and professional summary of trade sentiment patterns and Profit & Loss trends, suitable for submission to recruiters.