

TecHorizon Internship – Data Analytics Projects

Task 2 Report – Social Media Sentiment Tracker

Prepared By Syed Shahbaz
August 2025 internship

Introduction

The Sentiment Analysis Tracker was developed as part of Task 2 during the 2025 TechHorizon internship. The goal was to analyze public opinion towards a brand on Twitter (X) and visualize the trends over time.

Originally, the assignment was originally to capture real-time data using Tweepy(Twitter API). However, due to restricted API access, I created a custom sample dataset (CSV file) that stimulates real tweets about NVIDIA. This allowed me to show the entire workflow- data cleaning, sentiment classification, visualization, and reporting while staying aligned with the task objectives.

This project highlights how businesses can monitor customer feedback and adjust tactics based on public mood.

Libraries and Tools

The following libraries and tools were used:

- Pandas: essential tool for data handling and preparing the CSV file.
- Textblob: Sentiment analysis (positive, negative, neutral).
- Seaborn+Matplotlib: For generating sentiment distribution and trend visualizations.
- Python: Main programming language.

Methodology

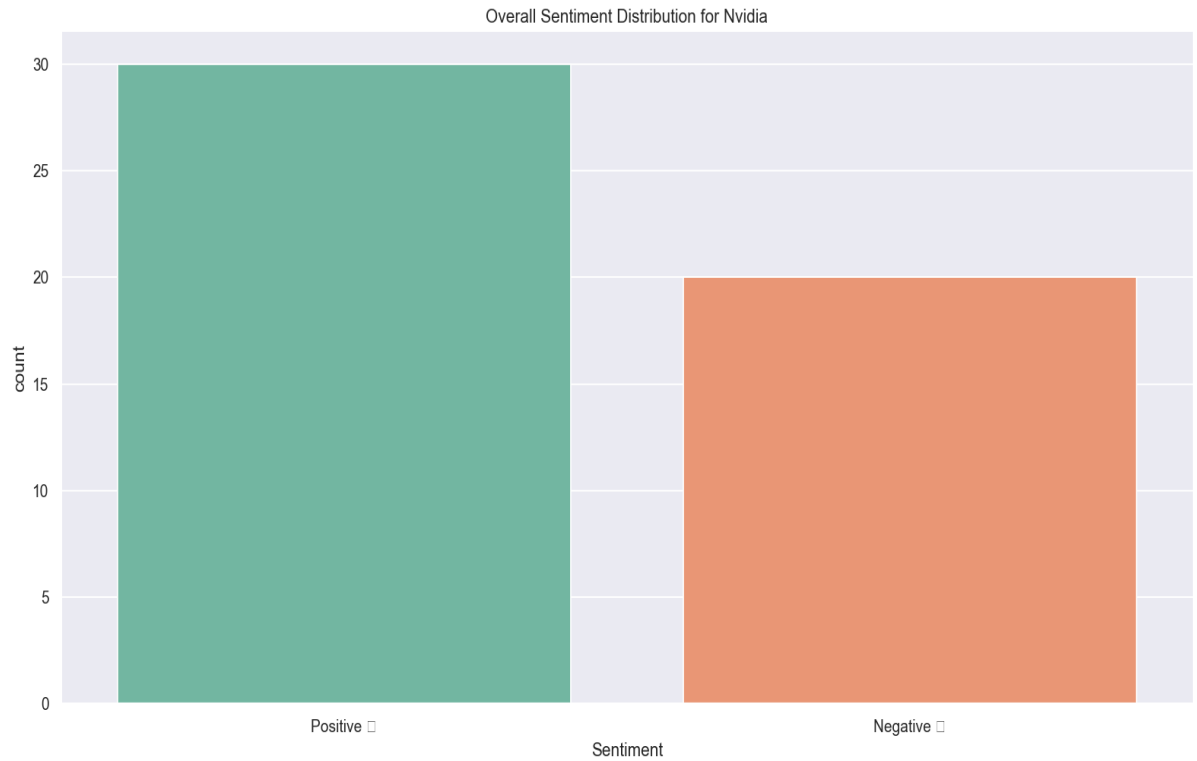
The analysis proceeded followed this methodology:

1. Data Collection: A custom dataset(sample_tweets.csv) was built to imitate tweets about NVIDIA, including fields such as date, username and text.
2. Preprocessing: Data loaded using Pandas and cleaning text fields.
3. Sentiment Classification: Textblob analyses each tweet and assigns sentiment polarity and category:
 - Positive 😊
 - Negative 😞
 - Neutral 😐
4. Countplot: depicts general sentiment distribution.
5. Countplot: shows sentiment trends over time.
6. Exporting Results: Processed dataset exported as CSV with sentiment labels for future use.

Results

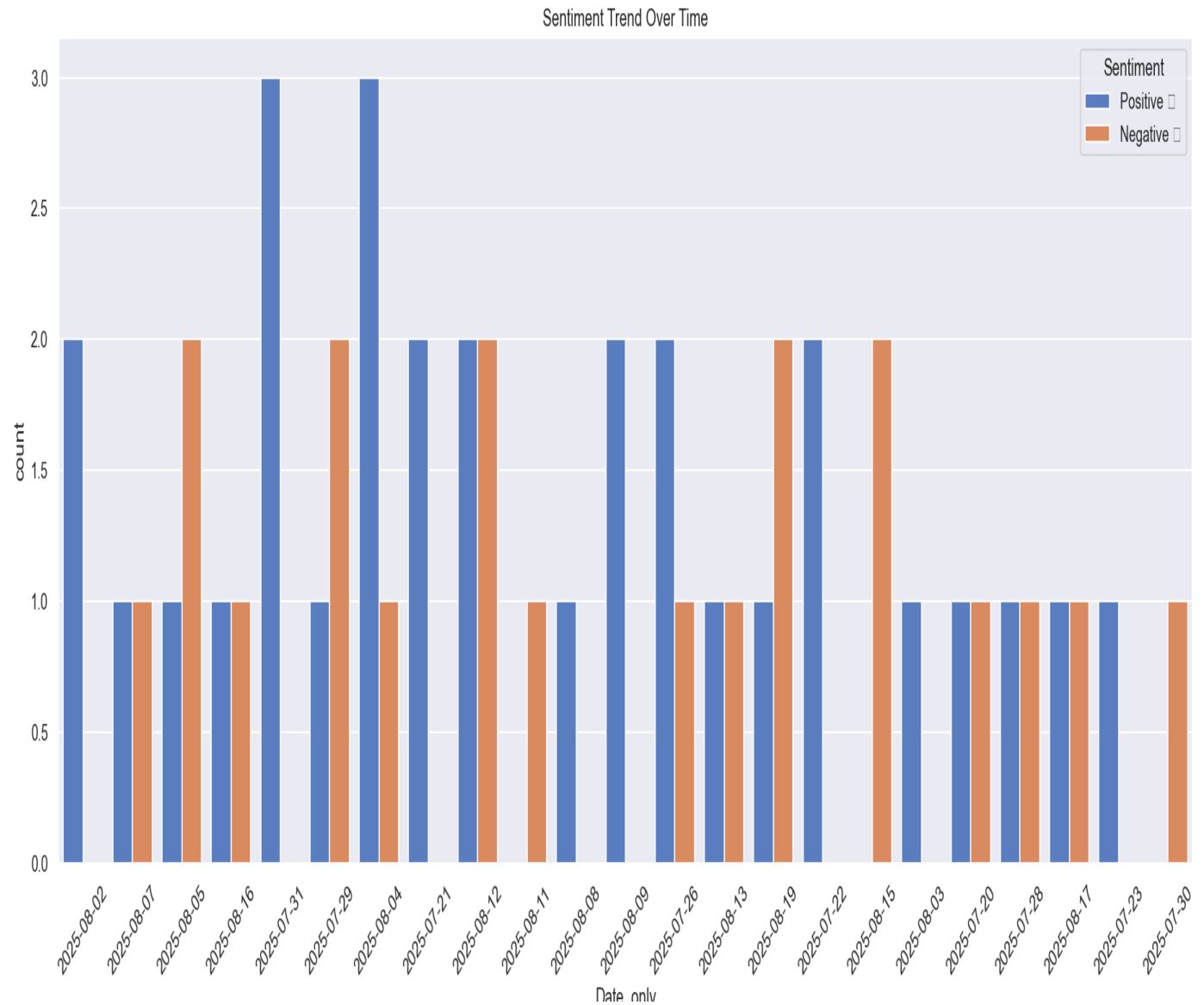
The tracker successfully divided the sample tweets into three categories:

- Overall Sentiment Distribution: showed a percentage breakdown of opinions (mostly positive, with minor negatives and no neutral opinions)



- Sentiment Trends: Over time showed how opinion changed in the dataset.

Figure 1



Business Insights

This tool enables companies to:

- Monitor brand perception in real time.
- Recognize negative sentiment spikes and respond proactively.
- Track the impact of marketing campaigns by comparing sentiment before and after promotions.
- Support data-driven decisions in public relations and product development.

Even though a dummy dataset was utilized, the workflow mimics what would happen with real-time tweepy data

Conclusion

Task 2 requirements were met:

- Sentiment analysis workflow
- Graphical representation of sentiment distribution and trends.
- Export of analysis results.
- Alignment with TecHorizon's goals: tools for business decision making.

While Tweepy was not used due to API restrictions, the creation of a mock dataset ensured that the project demonstrates how sentiment tracking works.