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Twitter Sentiment Analysis Project

May, 2025

Introduction



In today's digital age, social media platforms like Twitter have become powerful tools for analyzing public sentiment and emotions. This project analyzes Twitter data to extract sentiment insights and visualize emotions to understand user behavior better.

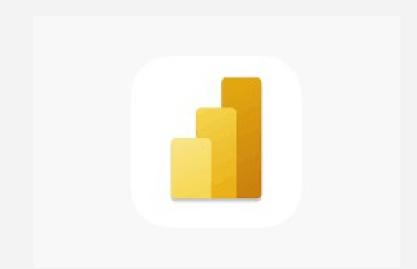


Project Objectives

- Analyze and visualize Twitter sentiment data.
- Identify key trends in positive, negative, and neutral sentiments over time.
- Evaluate dominant emotions such as joy, anger, and sadness.
- Display the most frequent keywords using a word cloud.

Tools Used

• Power BI: For creating interactive dashboards and visualizations.



 Python (Pandas, Matplotlib, Seaborn): Python (Pandas, Matplotlib, Seaborn): Used for cleaning, exploring, and preparing data. Applied natural language processing (NLP) techniques to clean text data, extract sentiment scores, and visualize how sentiment changes over time.



Data Analysis Insights



- Total Tweets: 24,970
- Dominant Sentiment: Positive (20.4%)
- Most Frequent Emotion: Joy
- Top Keywords: () A more detailed display of the most frequent words from the Word Cloud)
- Sentiment Distribution: Positive,
 Neutral, Negative

Dashboard Overview



Twitter Sentiment & Emotions Analysis

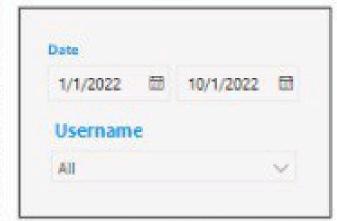
24,970

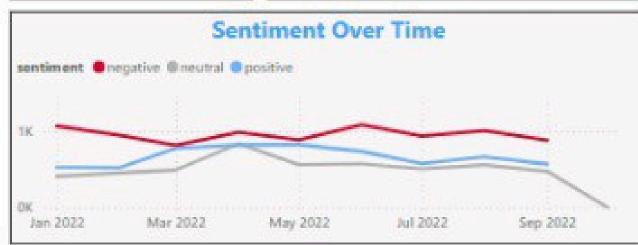
Total Tweets

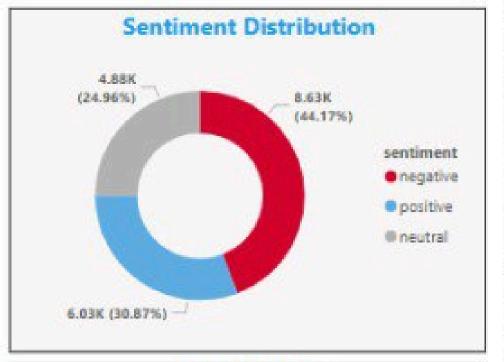
Positive

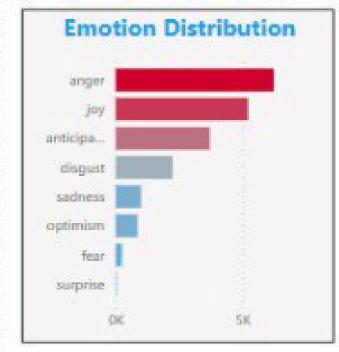
20.4 %

Most Frequent Emotion

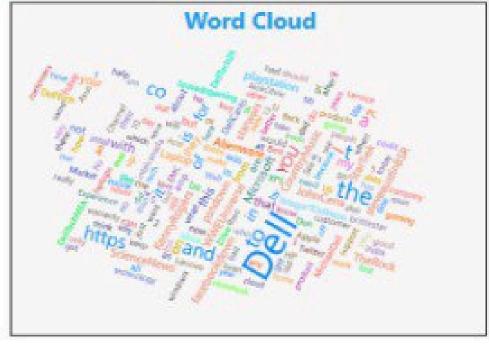






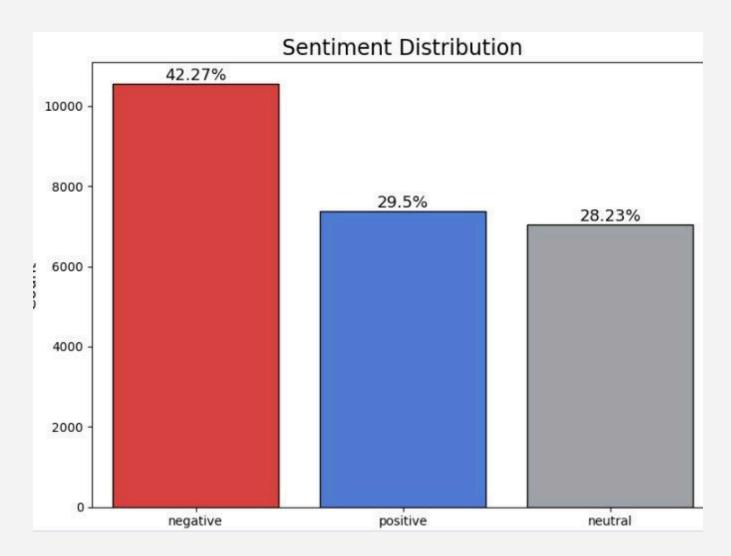


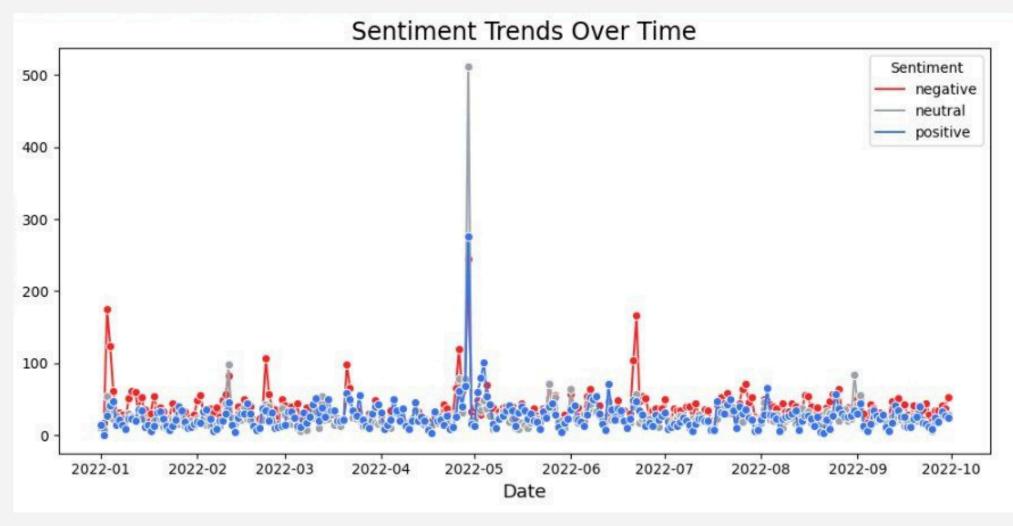
Tweet Id	Username	emotion	sentiment	emotion score
1520875899238814000	ZZebScott	anger	negative	0.98
1520876305352430000	ZZebScott	joy	positive	0.98
1490712318849827000	ZyroDegrees	joy	positive	0.99
1569964823995097000	zygoon	disgust	negative	0.61
1569972005293756000	zygoon	anticipation	negative	0.50
1570022229919900000	zxed	anger	negative	0.92
1554955166335619000	zweidrache	anger	negative	0.98
1481763894087455000	zWARnPEACE	anger	negative	0.86
1519835801030480000	ZUpfront	disgust	neutral	0.91
1501730289080406000	zubinanary	anticipation	neutral	0.55
1548994298921644000	ZubairA32604045	disgust	negative	0.80
1521064100893434000	zshekhar007	anger	negative	0.97
1509662004503589000	reattler	iov	nositive	0.99



Python Code Summary

Python was used to preprocess text data using libraries such as Pandas. NLP techniques, including sentiment analysis with TextBlob, were applied to extract sentiment scores and analyze sentiment trends over time using Matplotlib and Seaborn.





Conclusion



The Twitter Sentiment & Emotions Analysis project provided valuable insights into how users express emotions and sentiments on Twitter. By combining Power BI and Python, we were able to gain a deeper understanding of social media behavior and present it in an intuitive and actionable format.



Thank you