

Sentiment Analysis of Apple and Google Products Tweets

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Introduction.

This project delves into Natural Language Processing (NLP) to analyze sentiment in tweets pertaining to Apple and Google products.

Objectives.

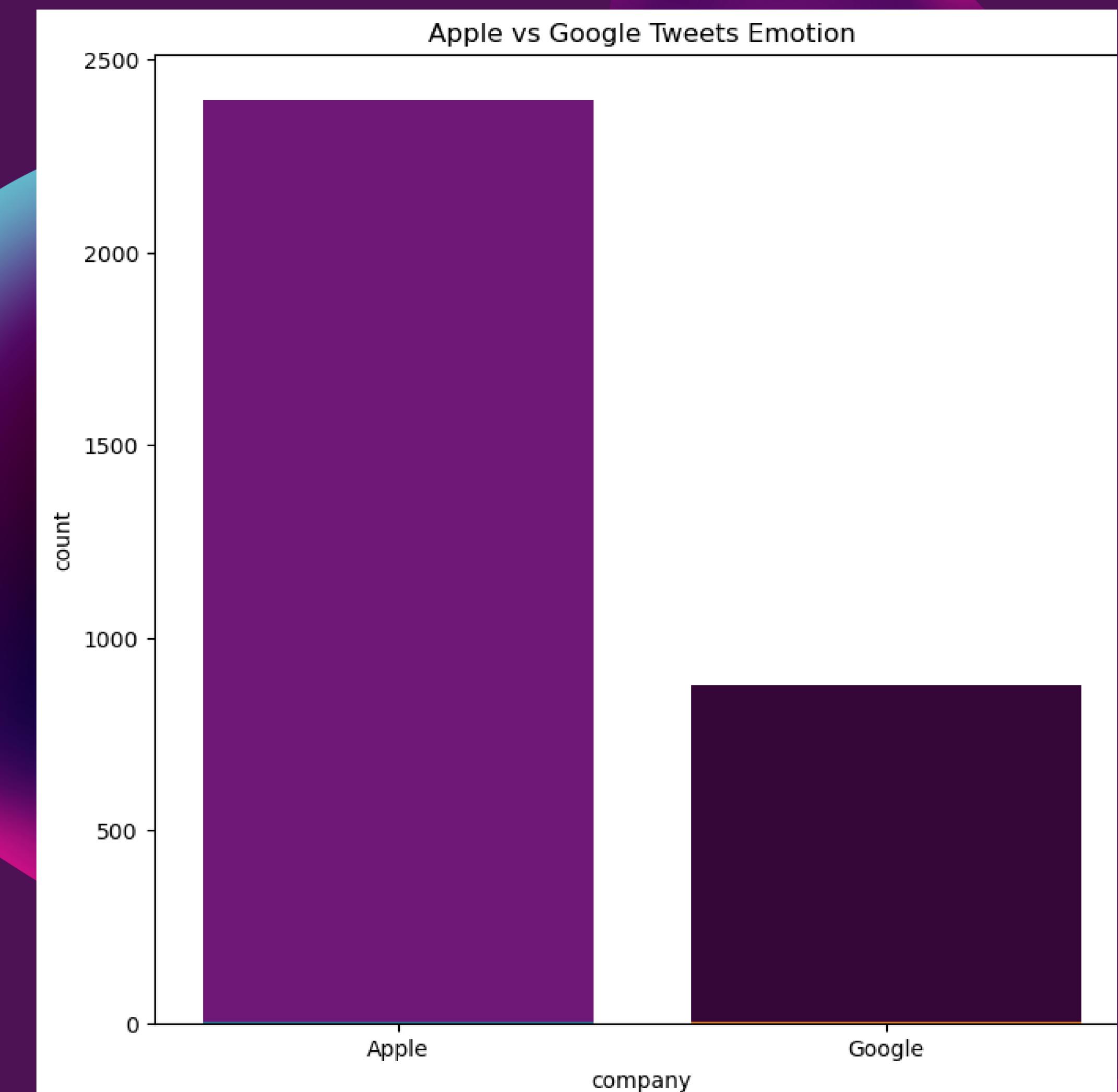
- 1. Create a precise sentiment analysis model.**
- 2. Categorize tweets as positive, negative, or neutral.**
- 3. Deliver valuable business insights.**
- 4. Improve brand perception and customer satisfaction.**

Data Preparation.

- preprocessing of raw tweet data, including text tokenization and the removal of stopwords.
- Encoding of target labels to prepare the data for machine learning.
- Conducted exploratory data analysis (EDA) to reveal insights into sentiment class distributions, word frequency, and other crucial characteristics.

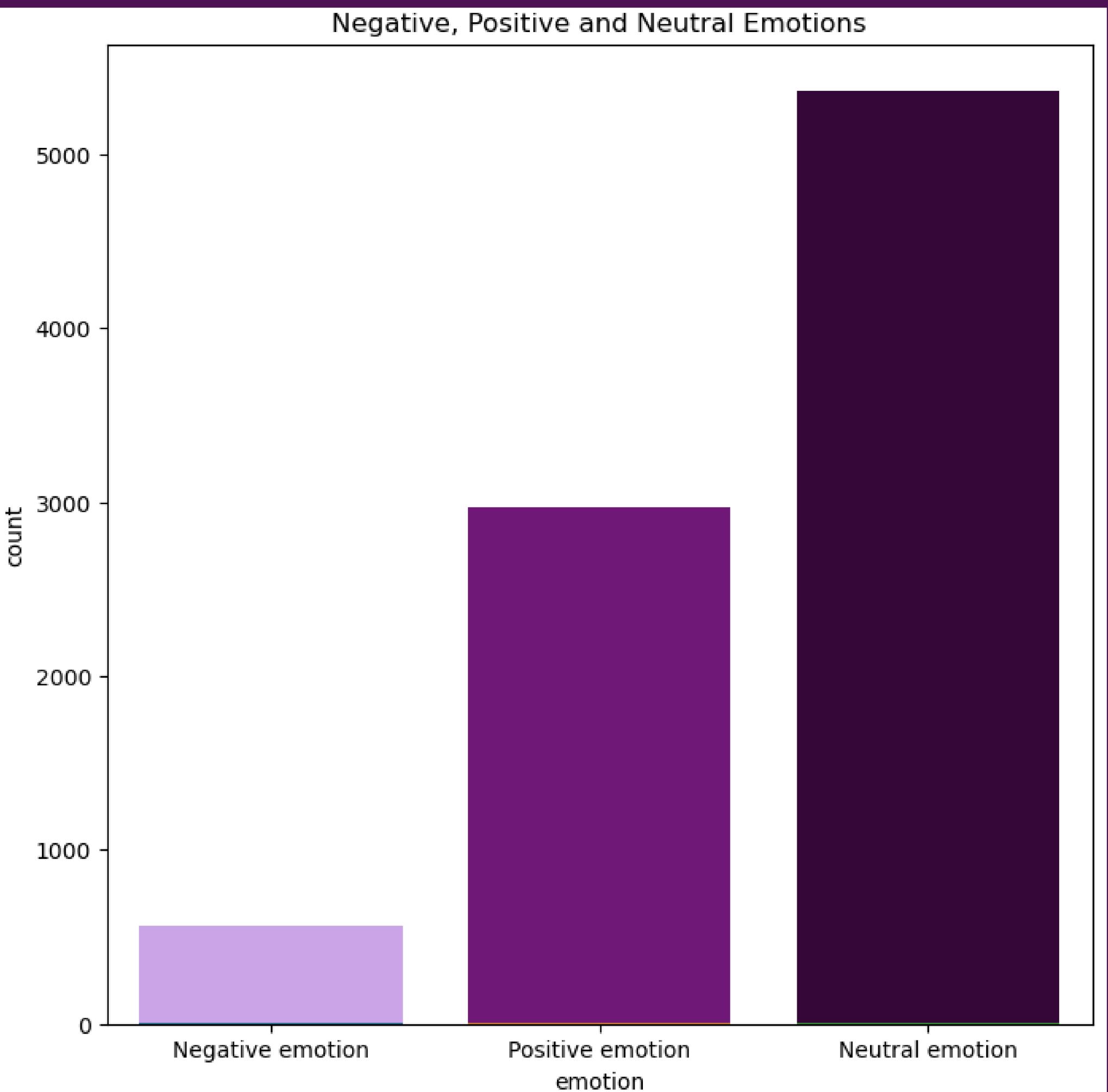
Apple tweets compared to Google.

The graph shows that Apple generates more tweets compared to Google.



Tweet Sentiment Visualization.

Tweets portraying neutral emotions are higher compared to those that are either negative or positive by a much greater percentage.



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Results.

- After modeling, most of the models had trouble predicting negative and positive tweets.
- The Random Forest Model was the best fit as it was successful.

Conclusion.

- Effective sentiment analysis is a valuable tool for understanding public sentiment.
- Enhanced oversampling techniques boosted predictions across tweet categories.
- The Random Forest model performed exceptionally, forming a strong basis for Twitter sentiment analysis.
- Continuous monitoring for real-time customer sentiment insights.

Recommendations.

- Utilize sentiment analysis for deeper insights into customer opinions and trends.
- Improve products by considering feedback to make customers happier.
- Adjust marketing strategies based on customer feedback for more effective communication.
- Stay ahead of the competition by keeping an eye on customer sentiments and market trends.

