# CrowdFlower Brands And product Emotions

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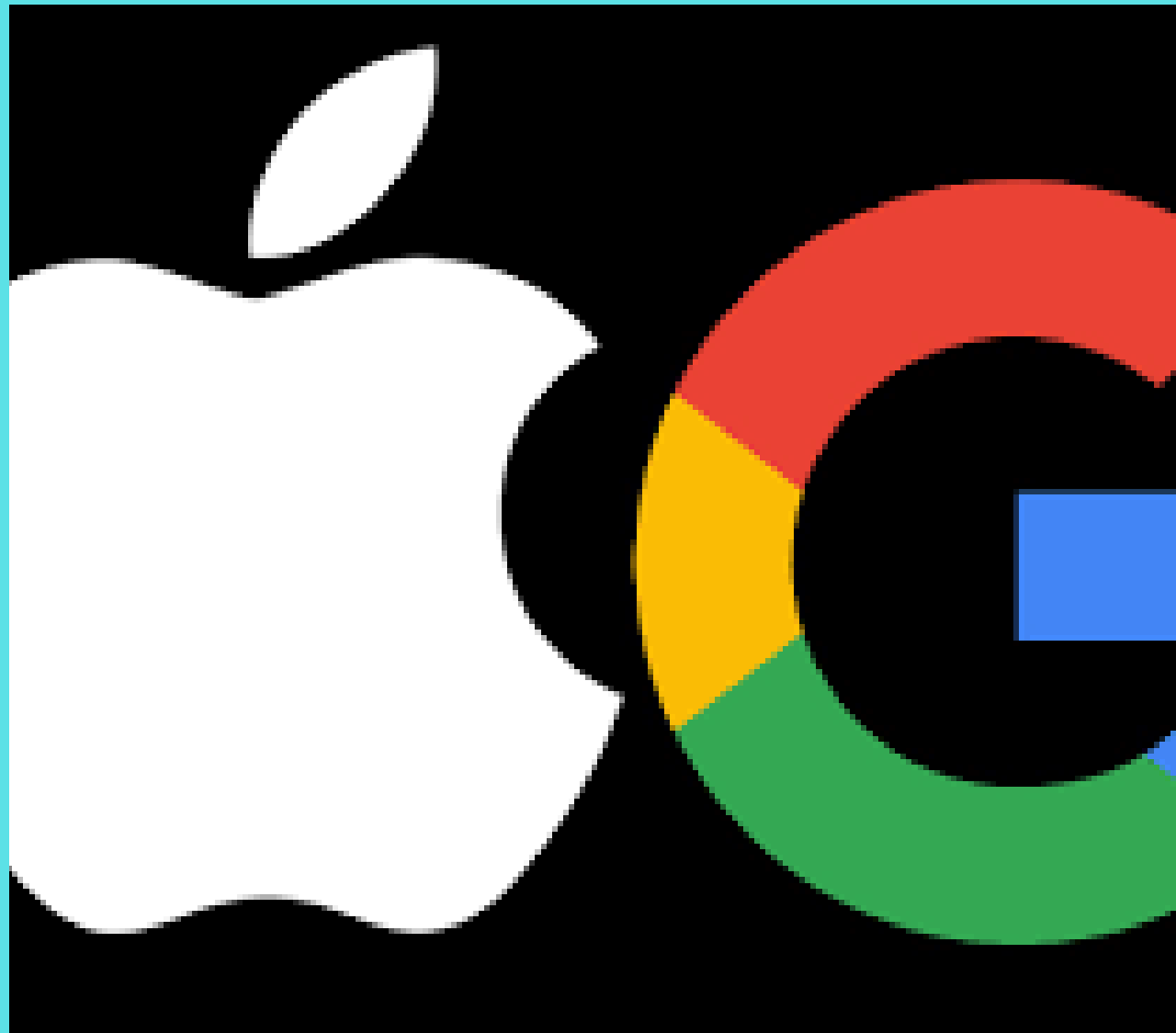
# Course outline



Human-in-the-loop for Machine Learning

CrowdFlower

ai.crowdflower.com

1. Business Understanding
1.2 Problem Statement
1.3 Main Objective
1.4 Specific Objectives
3. Data Understanding
4. Data Modelling
5. Evaluation
6. Recommendations
7. Conclusions
8. Challenges

# BUSINESS OVERVIEW



In the competitive landscape of today's market, establishing a profound connection between products or services and the emotions of the target audience is a strategic imperative. Emotional branding offers the potential to cultivate brand loyalty, trust, and differentiation.
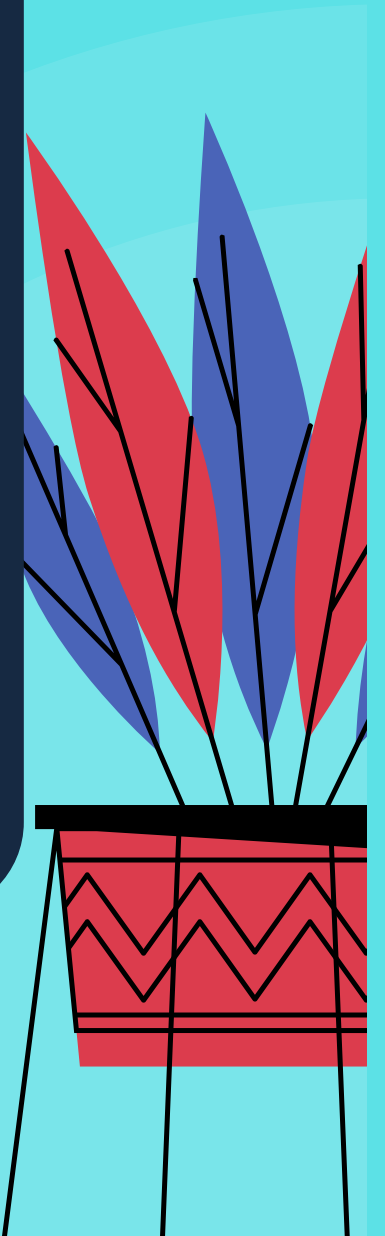
To harness the power of emotional branding, businesses must accurately gauge public sentiment towards their offerings, ensuring that the emotional connection aligns with their brand vision. By analyzing various sources of customer feedback, such as social media posts, sentiment analysis can determine whether the sentiment of the feedback is positive, negative, or neutral.

Employing sentiment analysis can lead to data-driven decisions, improving overall performance and reputation, and resulting in increased profitability and success.
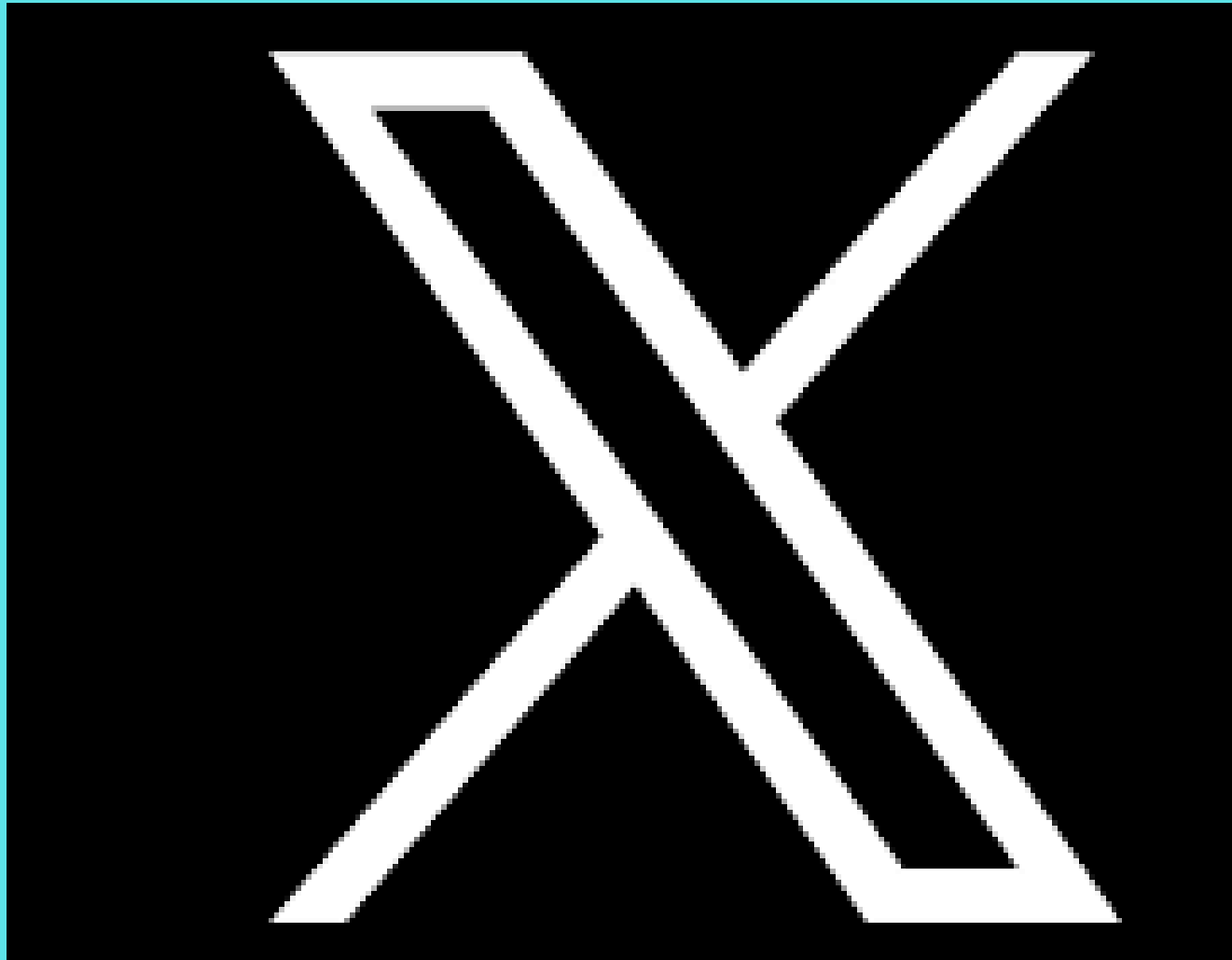
# MAIN OBJECTIVE

To use Natural Language processing to build models which can rate a sentiment on Google and Apple based on tweets.

SENTIMENT ANALYSIS

NEGATIVE
Totally dissatisfied with the service. Worst customer care ever.

NEUTRAL
Good Job but I will expect a lot more in future.

POSITIVE
Brilliant effort guy Your Work.

To use both NLP and deep learning models to classify tweets into positive, neutral and negative.

To visualize sentiment analysis, gain insights from them hence evaluate model performances to conlude informed decisions.

Understanding and preprocessing dataset of tweets related to google and apple products.

# Data Understanding

tweet_text - It contains information about the text

emotion_in_tweet_is_directed_at - It contains information about the brand i.e;
Apple
iPhone
Android App
Google Android
iPad or iPhone App
Other Apple product or service
Other Google product or service

is_there_an_emotion_directed_at_a_brand_or_product (will be used as the target) - It contains information about the emotion towards a given brand i.e;
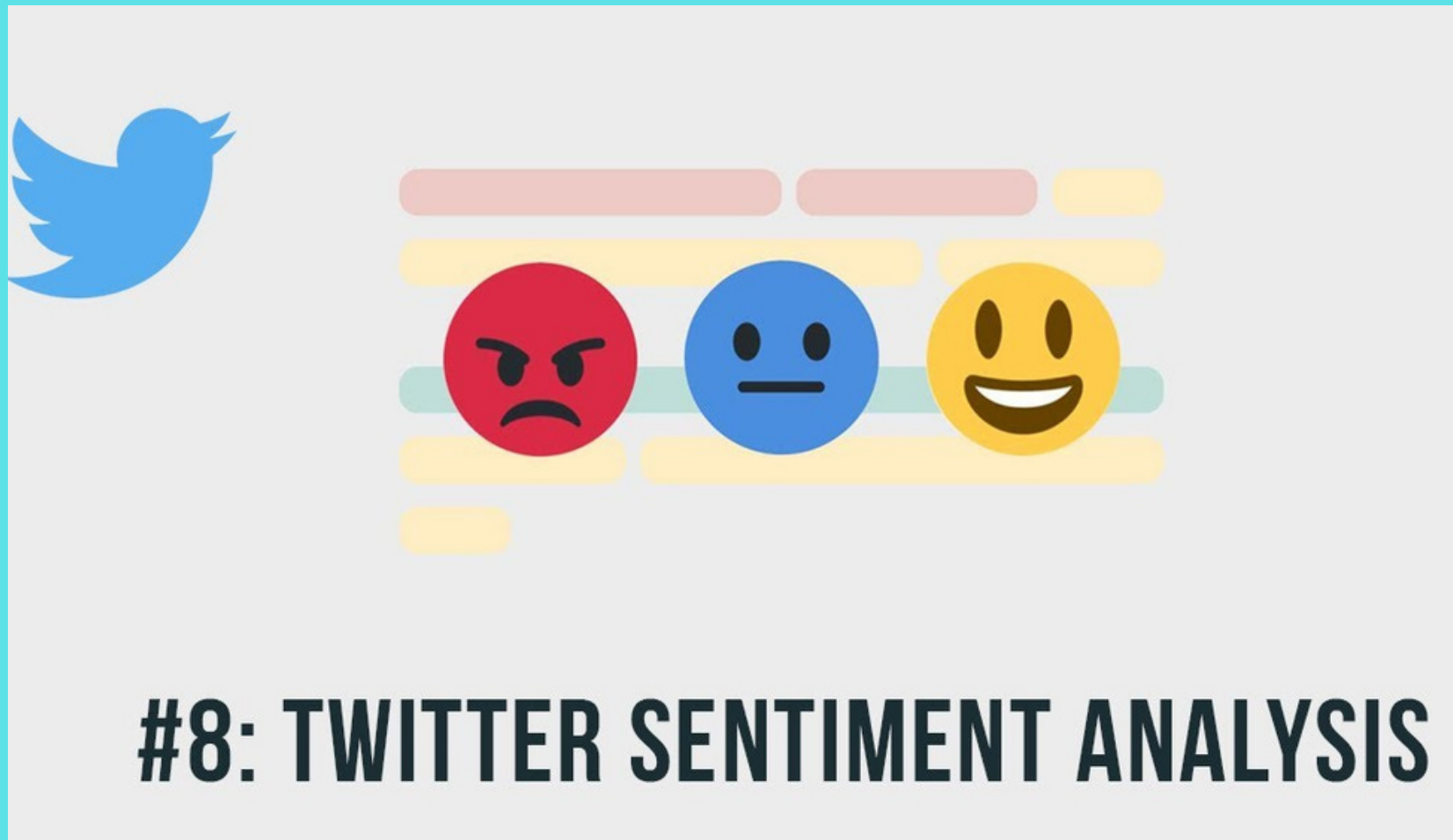I can't tell
Positive emotion
Negative emotion
No emotion toward brand or product

# Data Analysis



#8: TWITTER SENTIMENT ANALYSIS

What is the overall sentiment polarity of the text data? Is it positive, negative, or neutral?

How strong is the sentiment expressed in the text? Is it strongly positive or negative, or is it relatively mild?
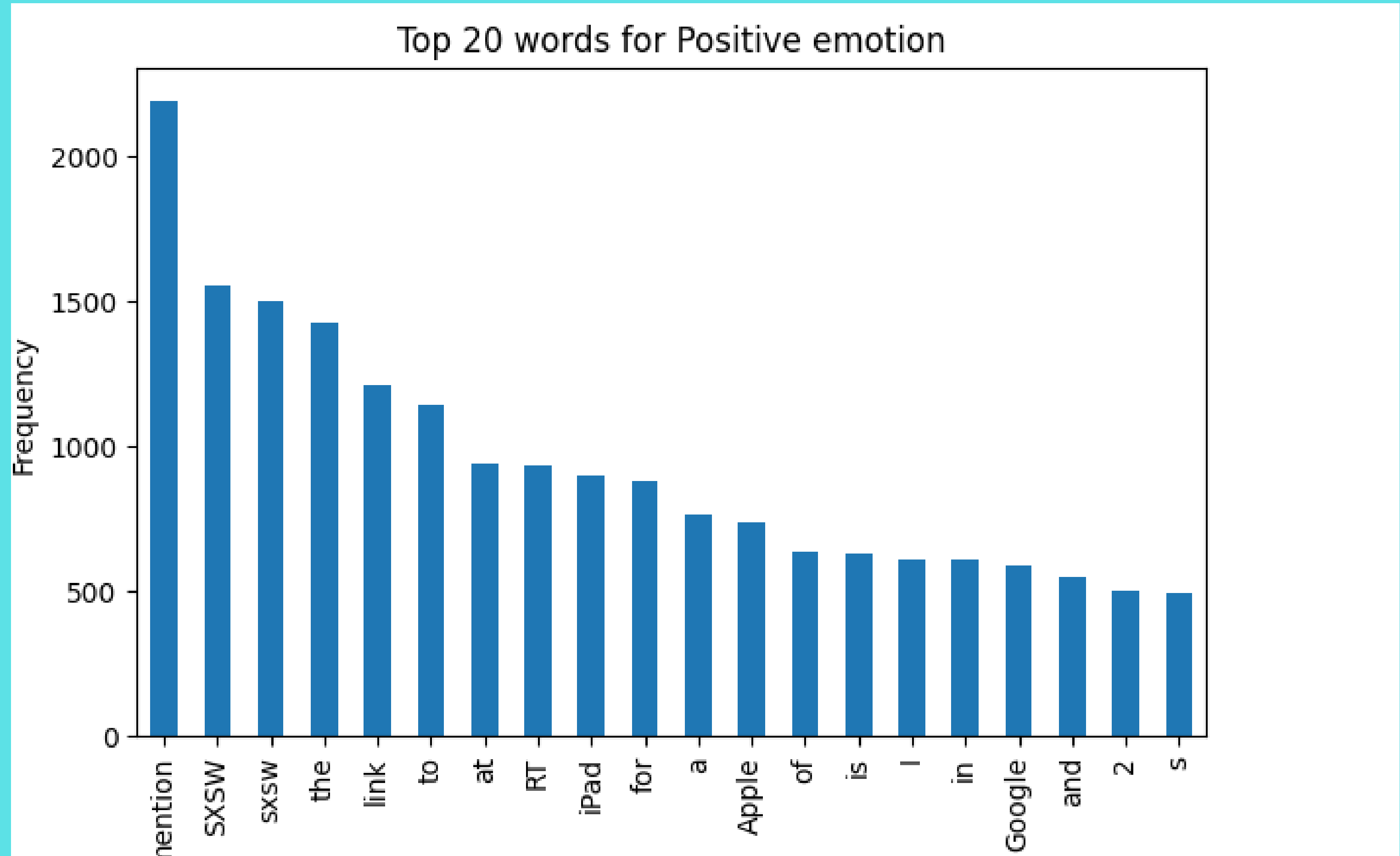
What are the specific aspects or topics mentioned in the text, and what sentiment is associated with each aspect? For example, in product reviews, what do customers like or dislike about a product?
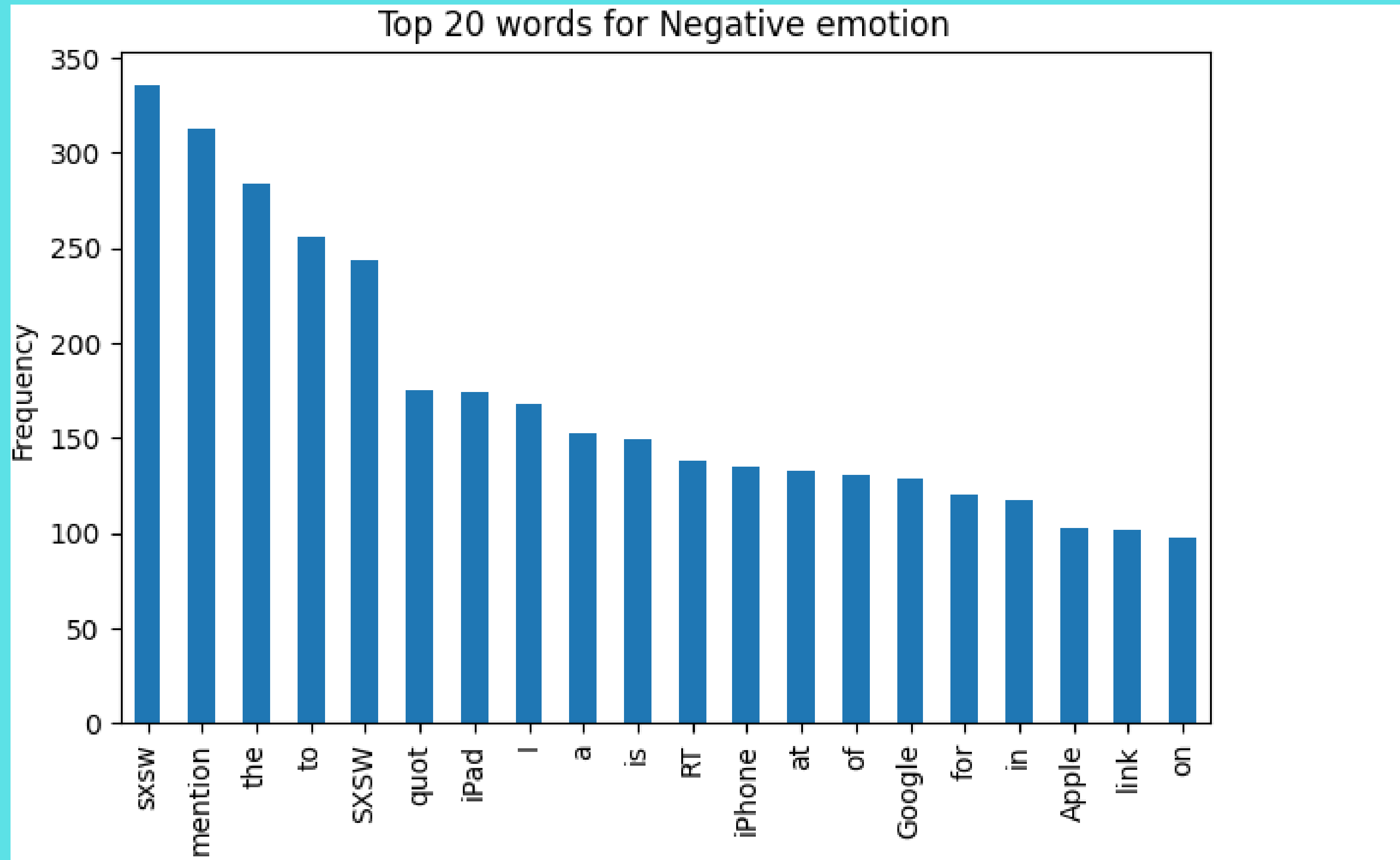
# Frequently used words

mention   great   good   ipad   apple

# Frequently used words for positive emotion



Top 20 words for Positive emotion

# Frequently used words for negative emotion



Top 20 words for Negative emotion

# Distribution of the sentiments



Sentiment Analysis
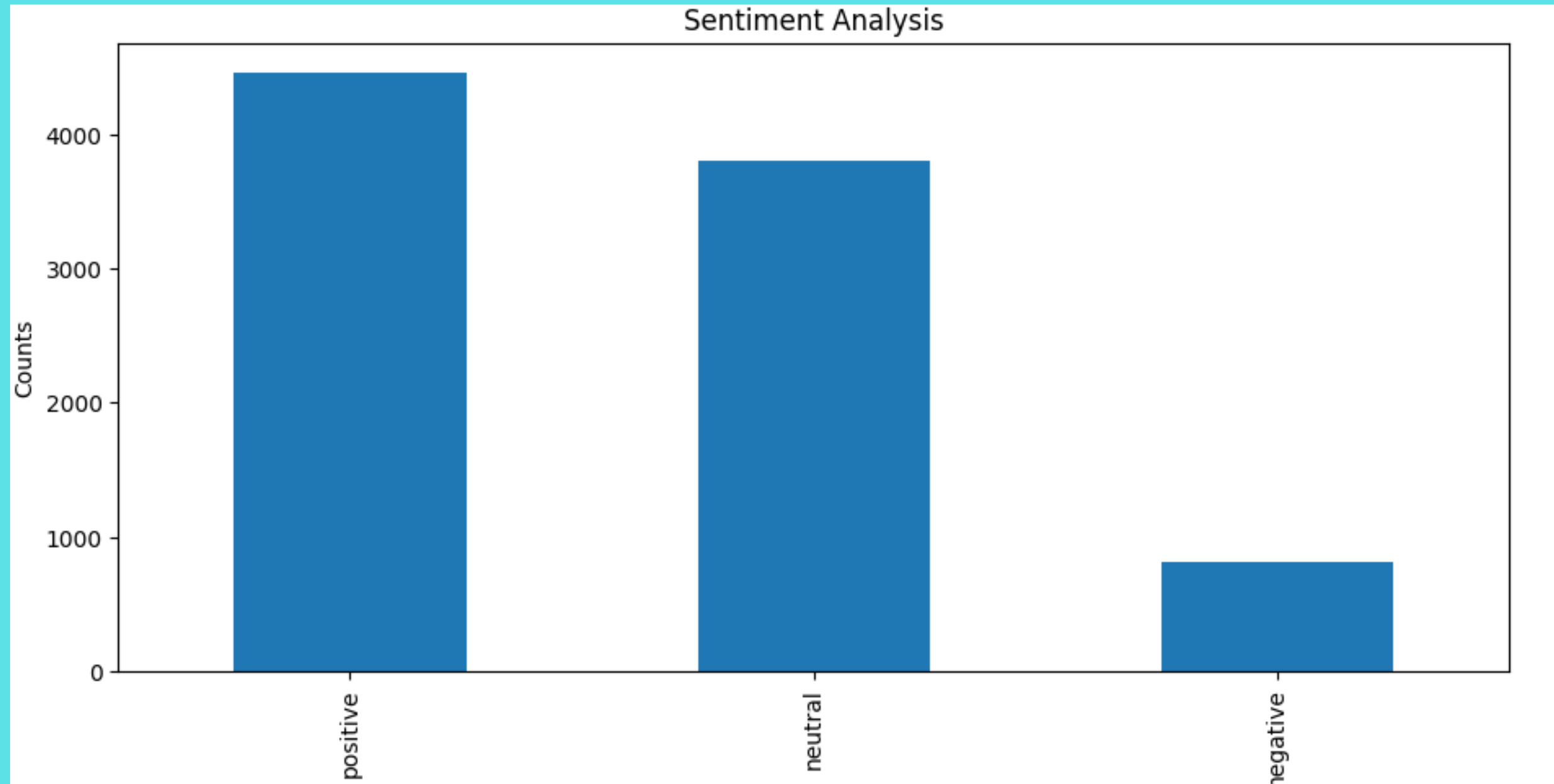
| | |
|---|---|
| positive | 4457 |
| neutral | 3799 |
| negative | 815 |

# Recommendations

The stakeholders should:

Leverage sentiment analysis models. They should improve the areas which lead to negative sentiments by identifying specific issues mentioned in the negative sentiment tweets and priotize their resolution.

Uphold positive ones. They should identify the positive tweets and feedback and capitalize on them hence use them to make progress.

Brand promotion. Share positive sentiment and customer success stories on twitter and marketing channels to bolster brand awareness and trust.

# Conclusions

Celebrate Positive Interactions: Positive sentiment tweets often mention words like great and good. Brands should acknowledge and celebrate these positive interactions. Sharing such experiences can build brand loyalty and trust.

Improve Communication: The analysis reveals that clear and effective communication is essential. Customers often express negative sentiments when they feel uninformed or frustrated. Brands should focus on enhancing their communication strategies.

Enhance Customer Service: in the CrowdFlower brands and products sentiment analysis, customer service plays a pivotal role. Addressing customer service concerns mentioned in tweets can significantly improve overall sentiment. Prompt and helpful responses can turn negative sentiment into positive experiences.

# Challenges

a. Data is way limited. Datasets should be diverse.

b. Quite a challenge developing NLP Models that accuately align tweets with specific emotions.

c. Scaling the solution for sentiment analysis and still maintain brand alignment with evolving emotions.

# Future work

Explore partnerships with additional data sources, such as social media platforms, to access a broader range of sentiments and opinions.

Investigate ways to engage more users or participants in the sentiment analysis process, potentially through gamification or crowdsourcing.

Collaborate with decision-makers in various industries to explore how sentiment analysis trends can inform strategic decisions.

# Contact details

For questions on the presentation, feel free to hit me up at: nicholas.kinyua@student.moringaschool.com

Thank you!