

SENTIMENT ANALYSIS

Brands and Product Emotions Sentiment Analysis.

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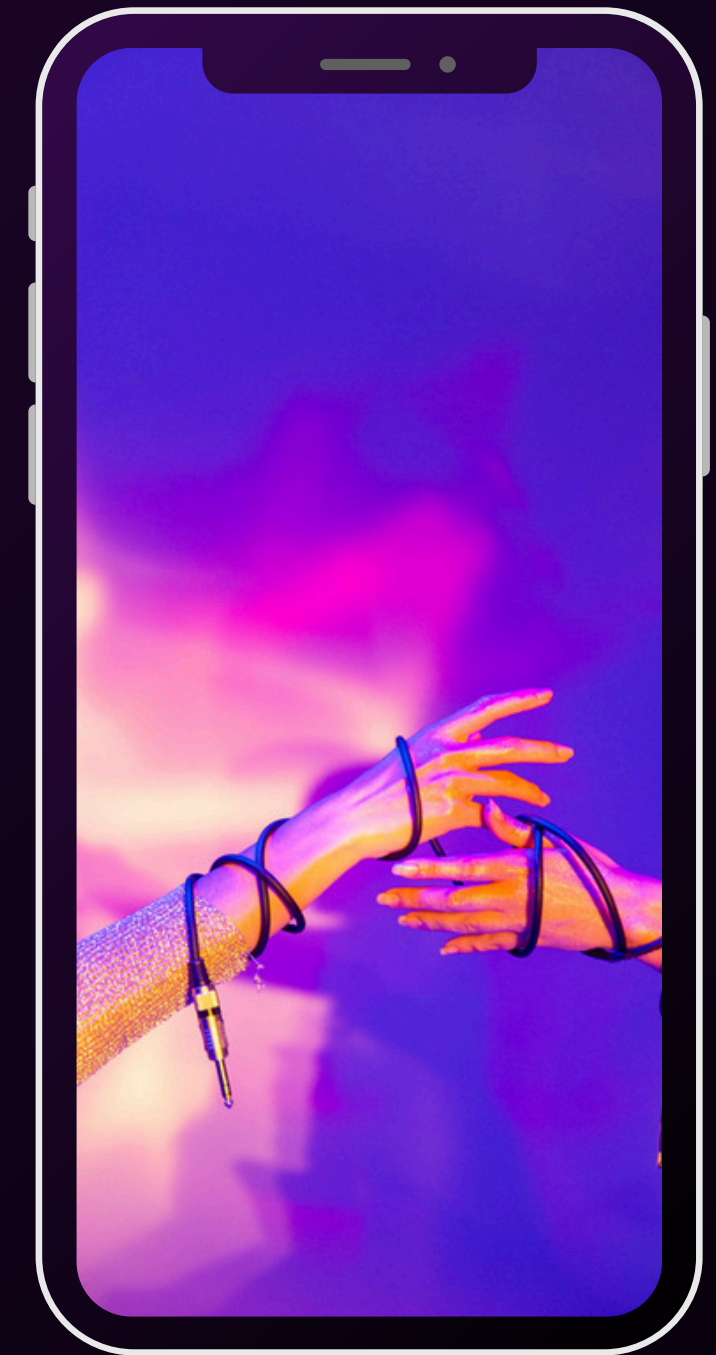
Conclusion.

Introduction

- Social media offers valuable insights into customer opinions about brands.
- Companies can use sentiment analysis to monitor reputation and improve customer experience.

Objectives:

- Analyze tweets about brands and products.
- Classify emotions into: Positive, Negative and Neutral
- Compare Binary and Multiclass models





Data Understanding

- The data set in use is the Brands and Products emotion data from data.world.
- It covers public opinions and emotions towards certain brands.
- The purpose is to understand consumer sentiments towards various brands.

Importance:

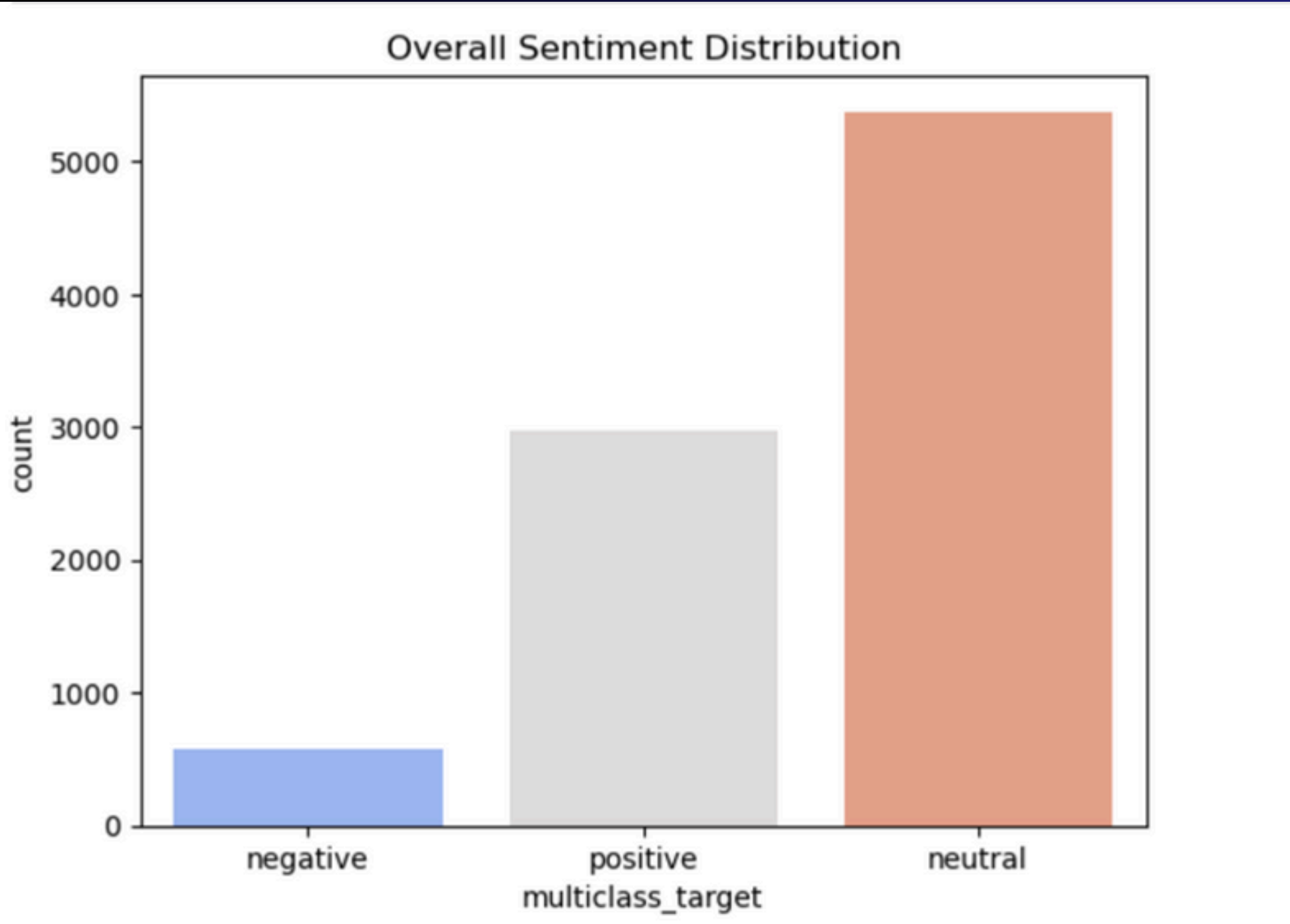
- It helps us monitor brand perception
- Enables sentiment models that predict Positive, Negative or Neutral emotions towards brands.

Approach

- Loading the data set
- Cleaning(Handling missing and duplicate values)
- Text preprocessing(tokenizing,lemmatization)
- Feature target selection
- Encoding and Vectorization
- Handling Imbalance
- Modeling
- Evaluation
- Deployment

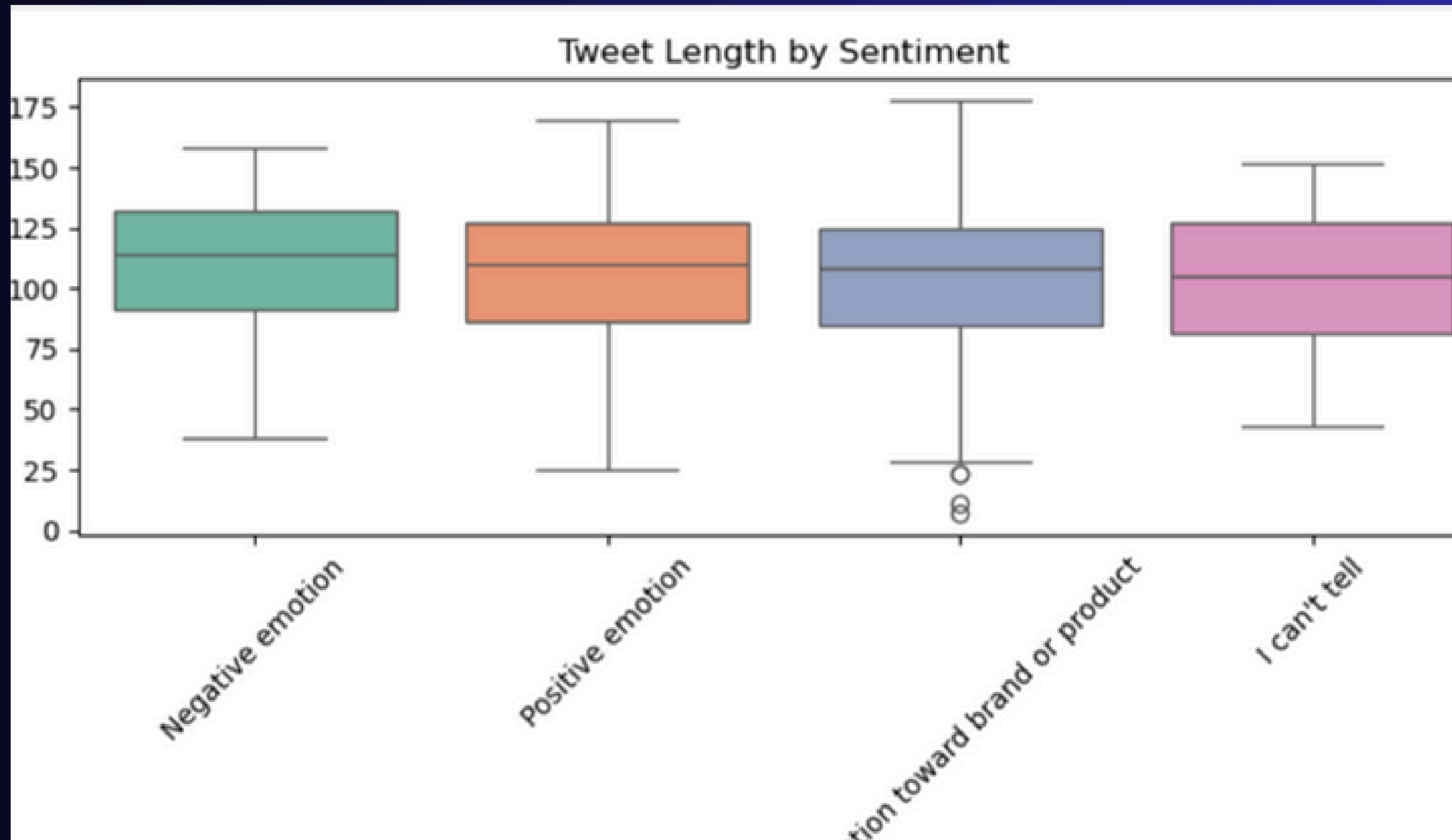


Sentiment Distribution



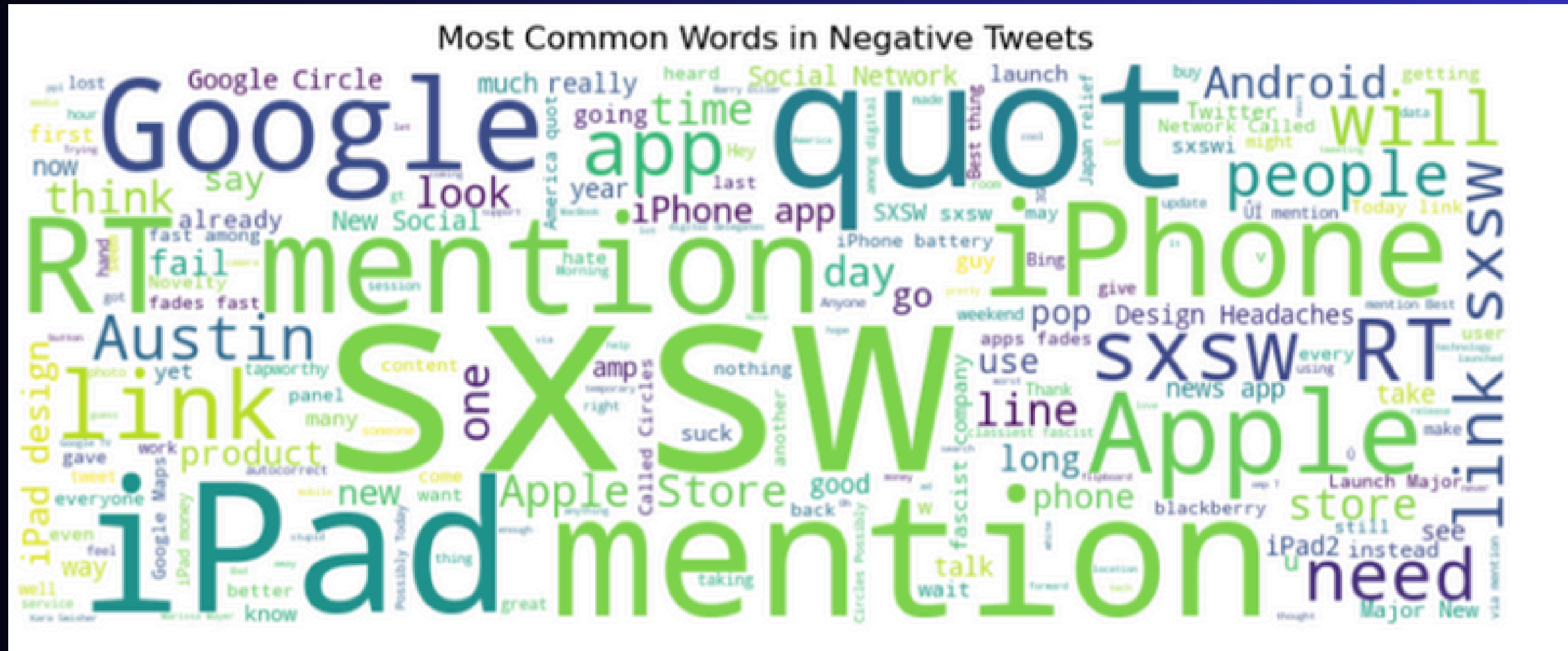
- Majority of the tweets are neutral

Tweet Length by Sentiment



- Tweets expressing positive or neutral emotion tend to be longer than the rest

Most common words: (Negative Tweets)



- **A few most common words in the Negative Tweets include: Headache, Difficult, Fail**

Key Findings

- **Consumers express mainly positive or neutral sentiments towards brands**
- **Logistic Regression is the most effective**
- **Negative sentiment underrepresentation**

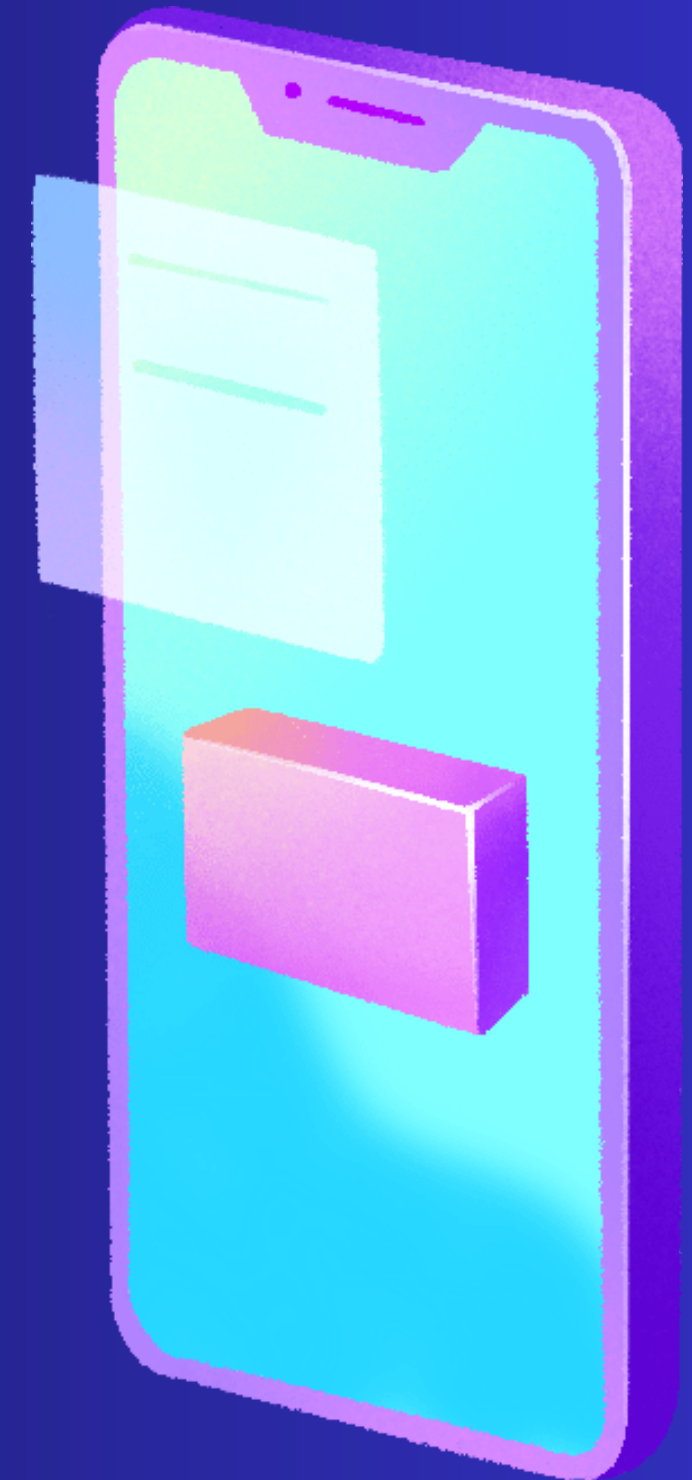


Recommendations

- Expand data set with more balanced data
- Include more brands

Application of NLP Sentiment Analysis

- **Brand Monitoring:** Track customer feelings about the brand over time.
- **Marketing Optimization:** Pinpoint campaigns that drive positive engagement or negative feedback.
- **Customer Insights:** Uncover pain points or drivers of satisfaction.
- **Faster Decision-Making:** Provide near real-time feedback analysis.





THANK YOU