

Moringa Group 21



Group Members



Karanja Gakio



Eunice Ndwati



Jane Mwangi

Project Overview



The SXSW conference seeks to enhance future attendee experiences by analyzing sentiment in historical tweets. We aim to develop a model for accurate sentiment analysis.

The Data



Our dataset is provided by CrowdFlower comprising approximately 9,000 tweets associated with past SXSW events.



DATA CLEANING

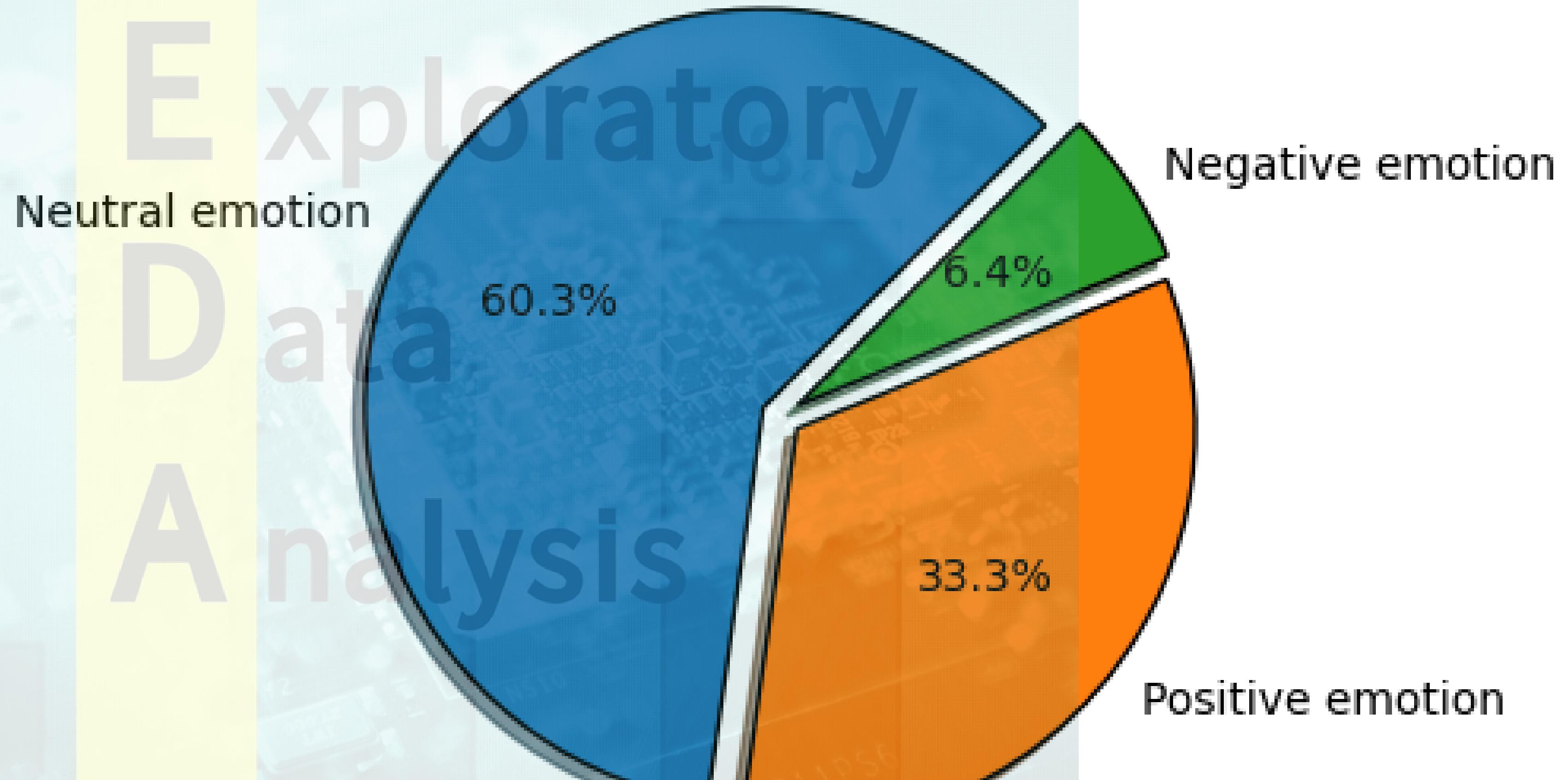
Data cleaning involved radical steps which includes renaming columns for easier reference ,removing missing values and duplicates

E xploratory D ata A nalysis

EDA analysis performed include:

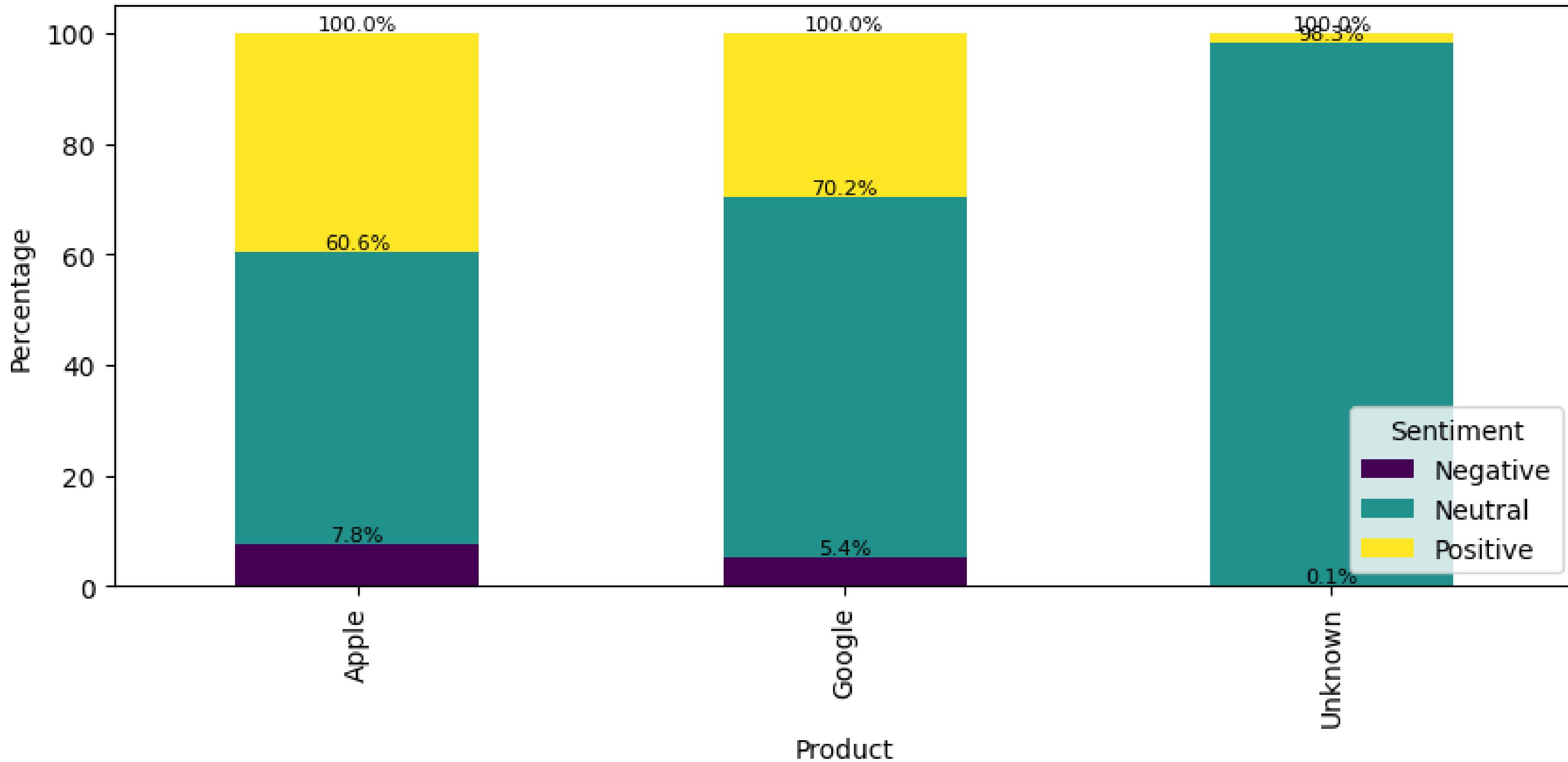
- _overall sentiment distribution
- _Examining unique words and their frequency
- _Analyzing hashtags and mentions

Overall Sentiment Distribution



E
D
A

Sentiment Distribution per Product



Exploratory Data Analysis

Word Cloud for Hashtags

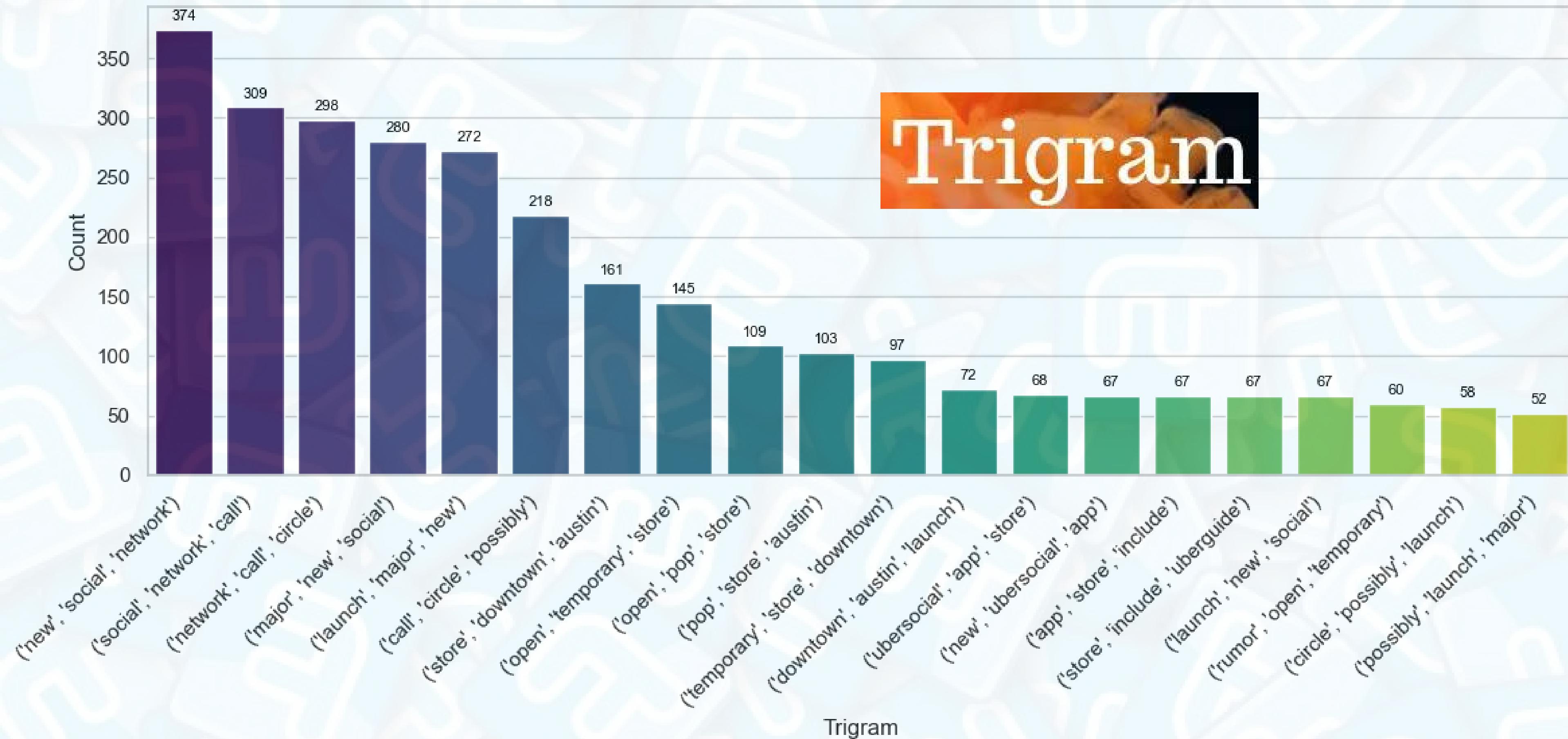


Exploratory Data Analysis

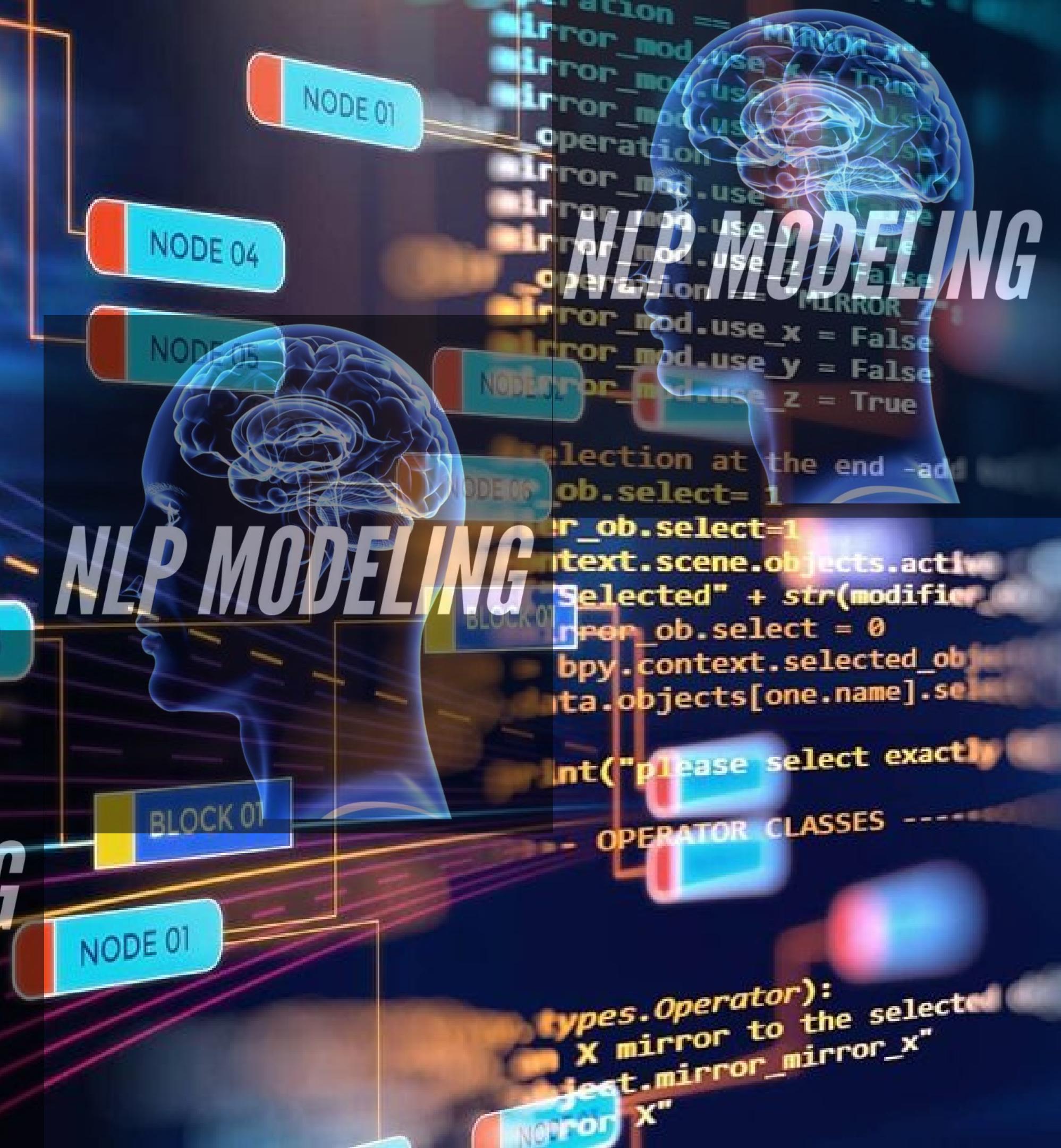
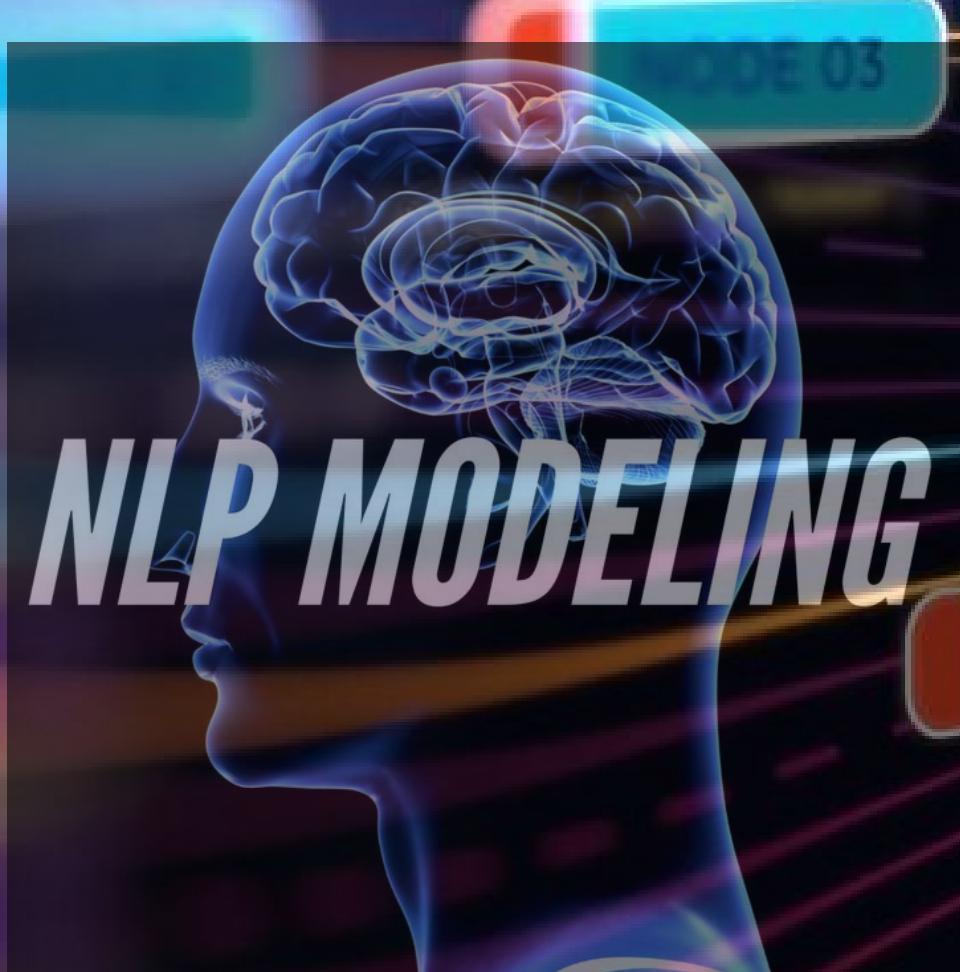


Exploratory Data Analysis

Top 20 Most Common Trigrams with Counts



MODELING



MODELING

We created 4 NLP models and picked svm as our final model

Classification report

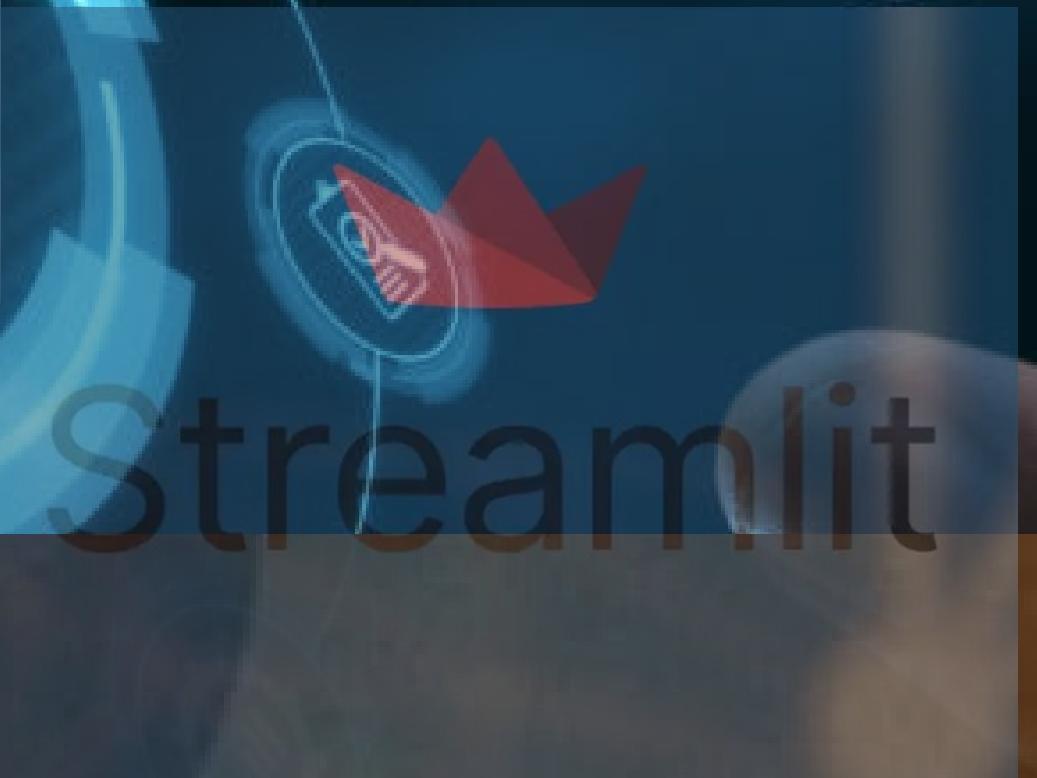
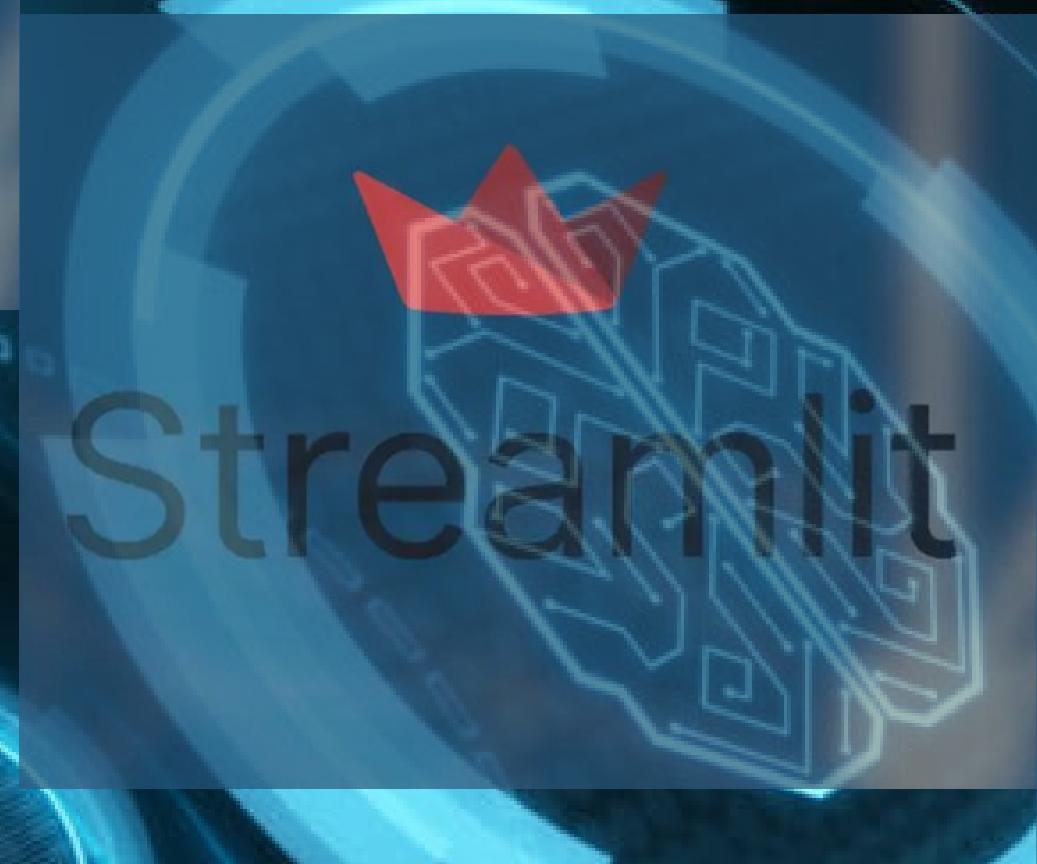
| | precision | recall | f1-score | support |
|------------------|-----------|--------|----------|---------|
| Negative emotion | 0.87 | 0.12 | 0.21 | 171 |
| Neutral emotion | 0.70 | 0.87 | 0.78 | 1608 |
| Positive emotion | 0.63 | 0.47 | 0.54 | 896 |
| accuracy | | | 0.69 | 2669 |
| macro avg | 0.73 | 0.48 | 0.51 | 2669 |
| weighted avg | 0.69 | 0.69 | 0.66 | 2669 |

DEPLOYMENT



DEPLOYMENT

Streamlit

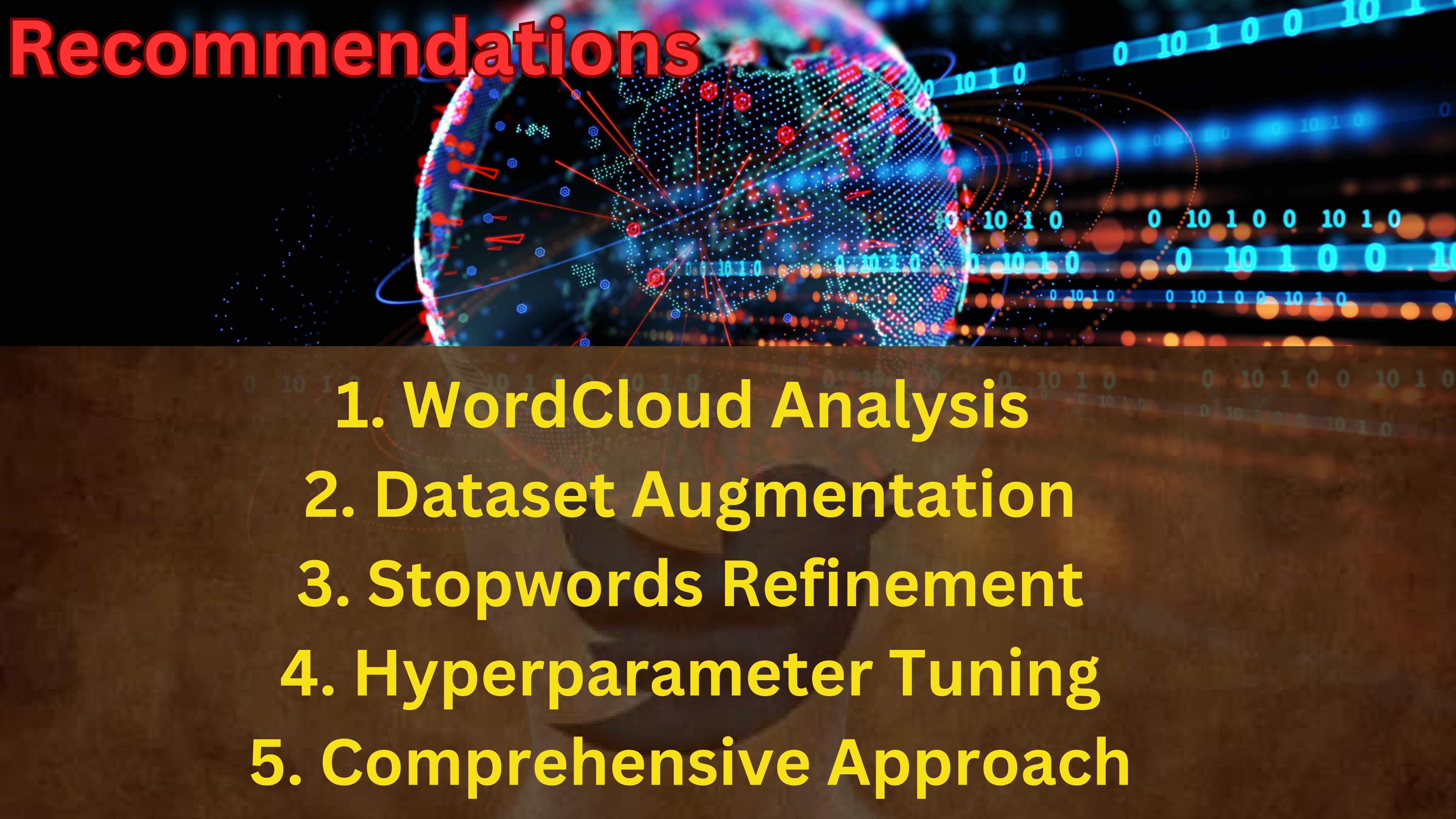


We deployed our model using **STREAMLIT**

Conclusion

1. Our Model excels in neutral emotion recognition
2. Strategic adjustments and continuous improvement are crucial focus on enhancing handling of negative and positive emotions
3. SVM model, the best performer, achieves 68.68% accuracy

Recommendations

- 
1. WordCloud Analysis
 2. Dataset Augmentation
 3. Stopwords Refinement
 4. Hyperparameter Tuning
 5. Comprehensive Approach