

Analyzing Tweets: Positive or Negative



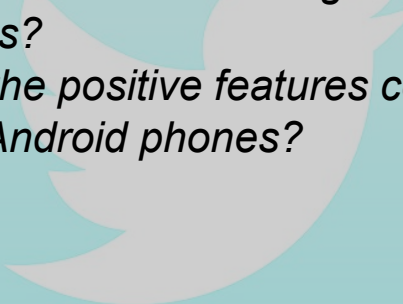
Purpose

A client is looking to design and manufacture a new smart phone and will invariably compete with Apple and Google products. They have provided us with a data set of Tweets and would like more detail regarding negatively and positively charged Tweets directed at both iPhone OS and Android OS phones.

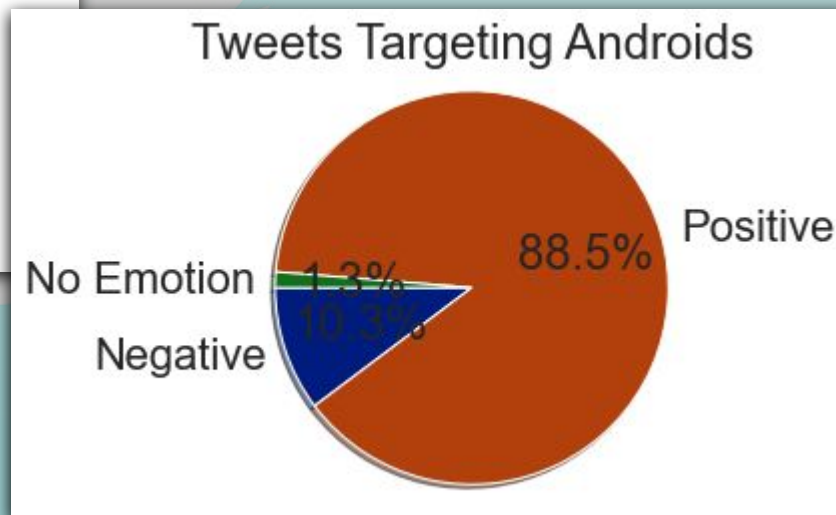
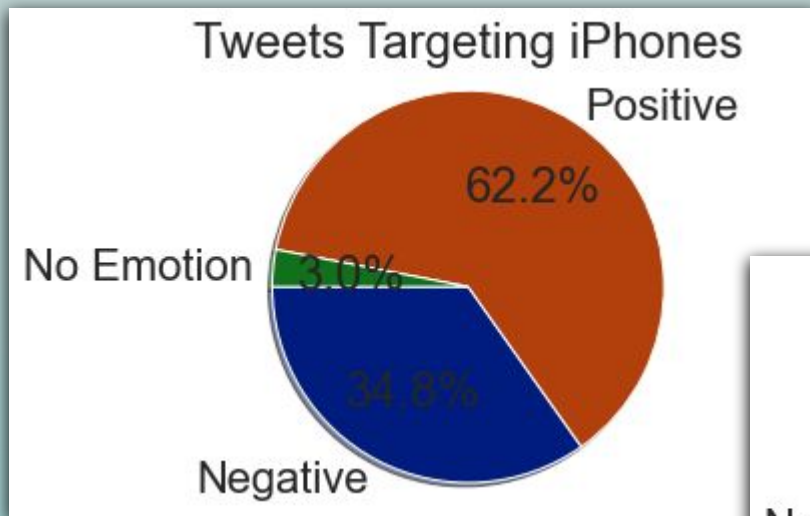
Our challenges are -

1. *To highlight any negative features of iPhones and Androids so that they can reduce them in their new product and*
2. *To highlight positive features of iPhones and Androids so that they can implement or improve them in their own product*
3. *To provide recommendations that will improve their future product*

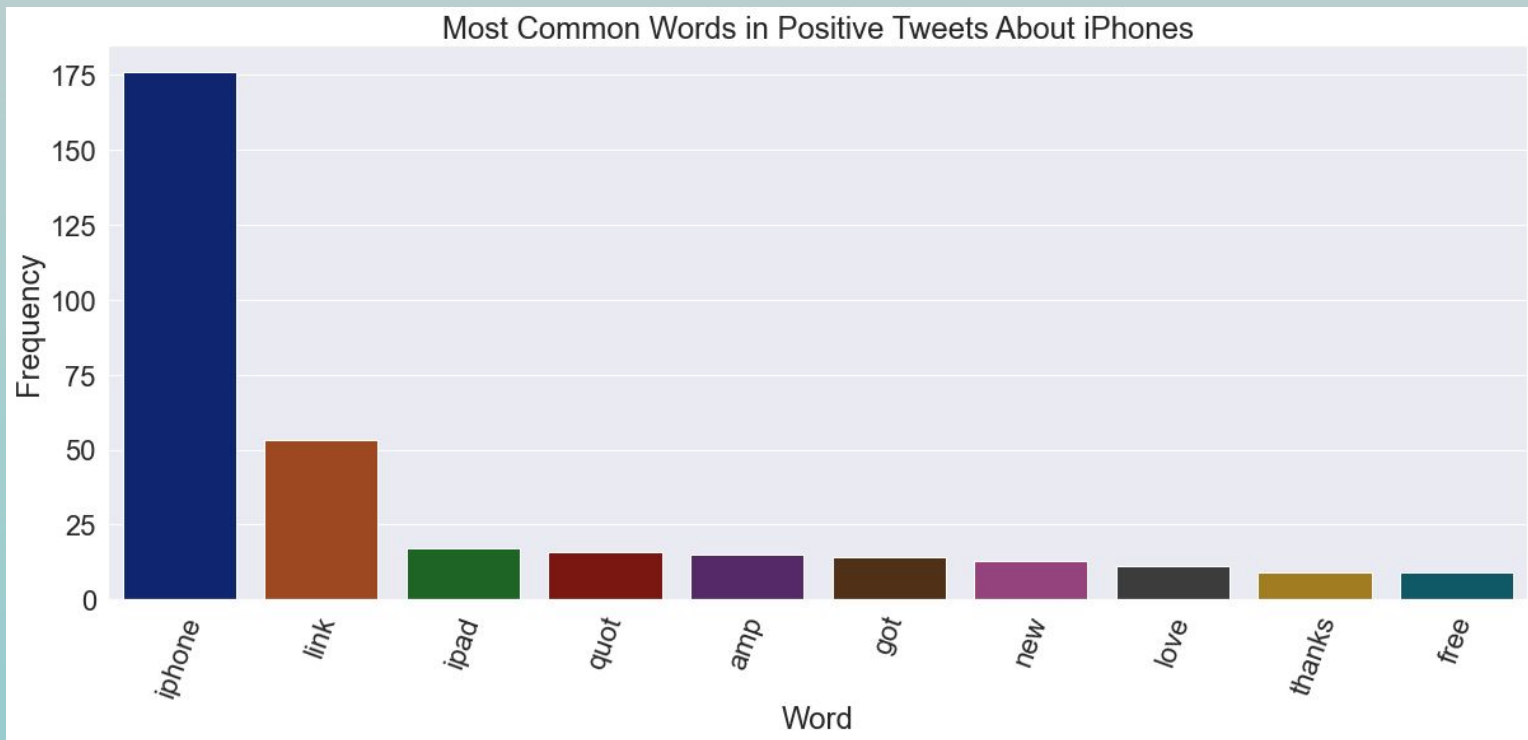
Questions

1. *In tweets targeting either the iPhone or Android phones, which product is more often the subject of negatively charged emotions?*
 2. *What words are most common in negative tweets about iPhones and Android phones?*
 3. *What are some of the positive features commented about for both iPhones and Android phones?*
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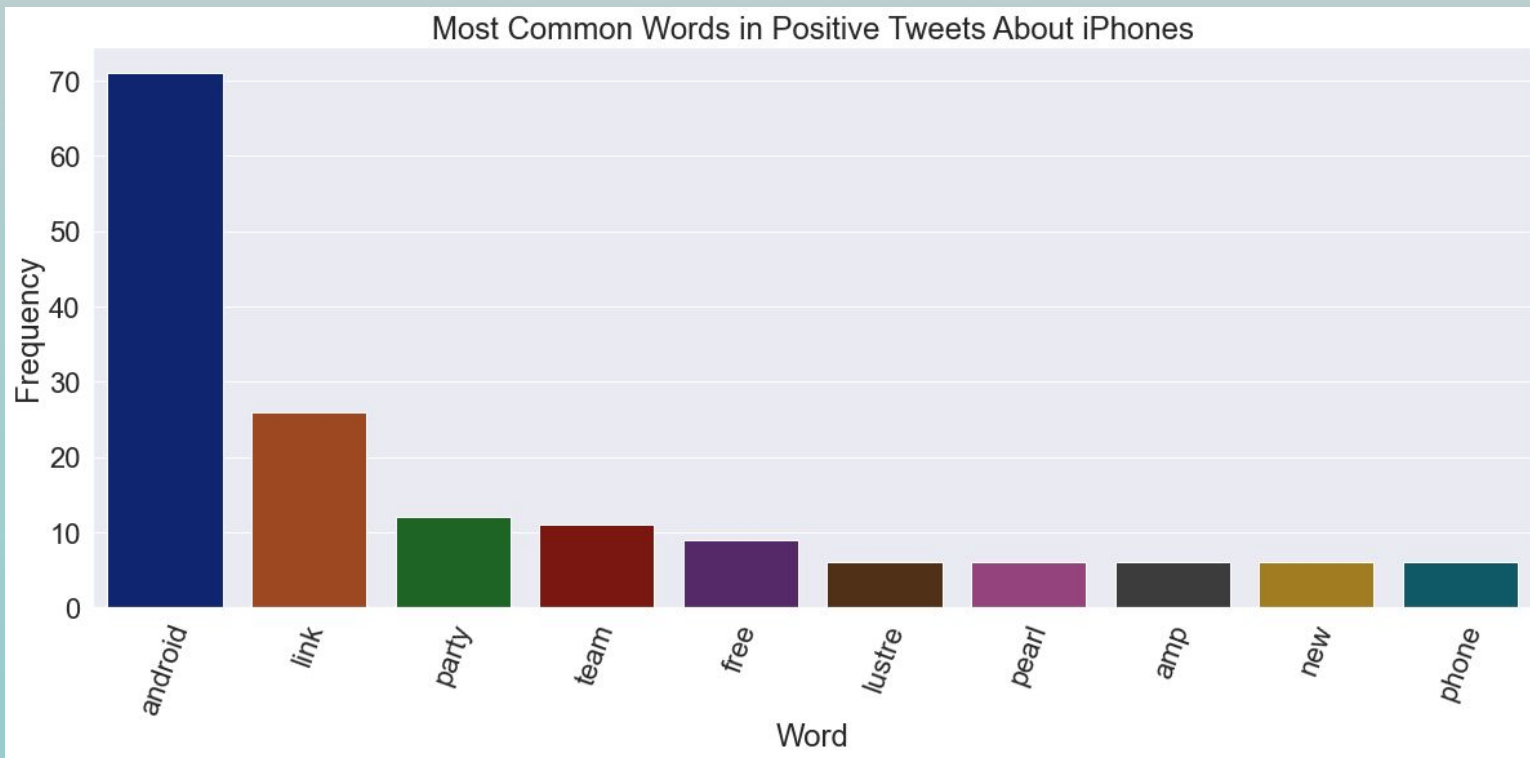
Question Insights



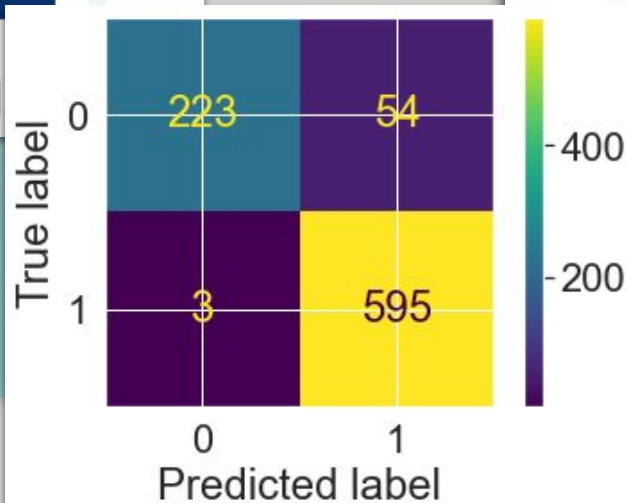
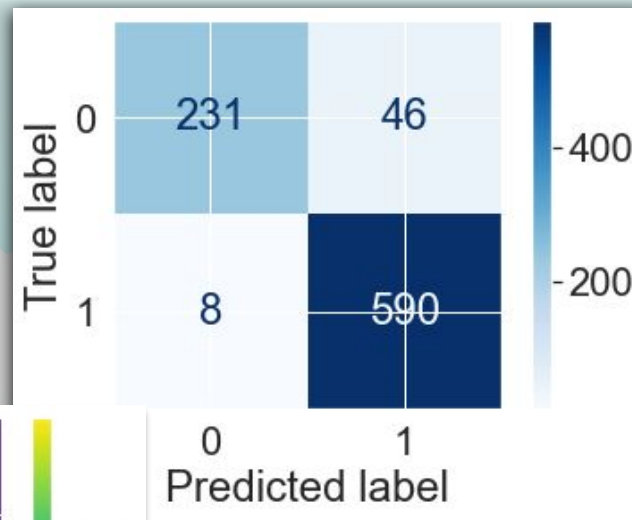
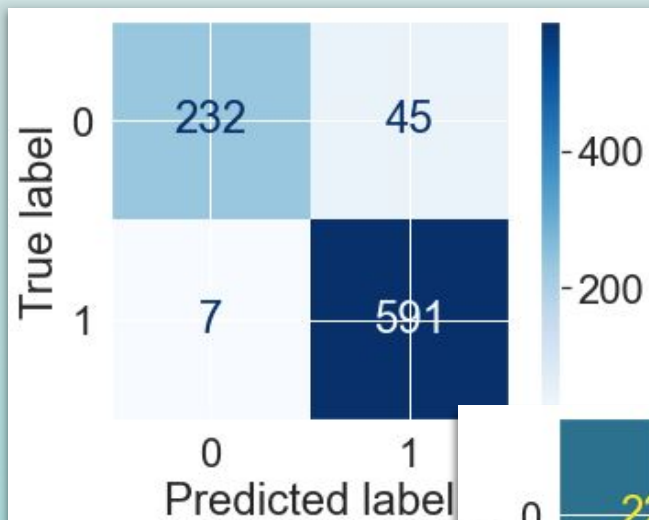
Question Insights



Question Insights

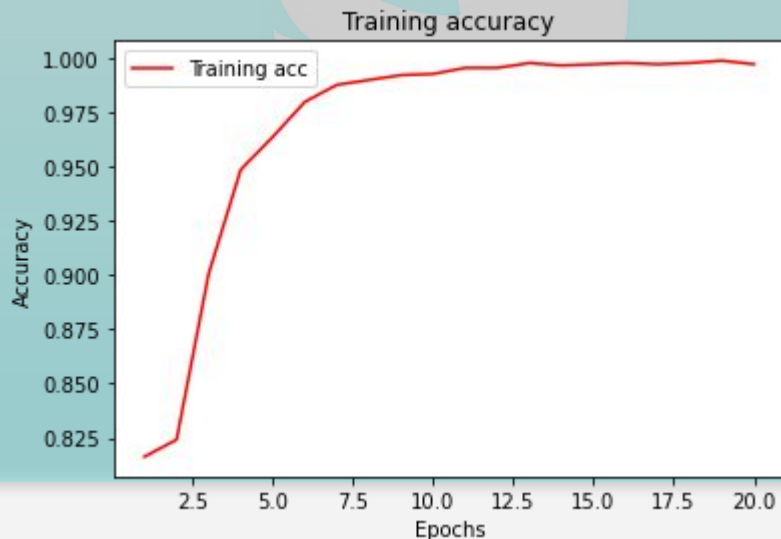


Overall Insights - Supervised Learning

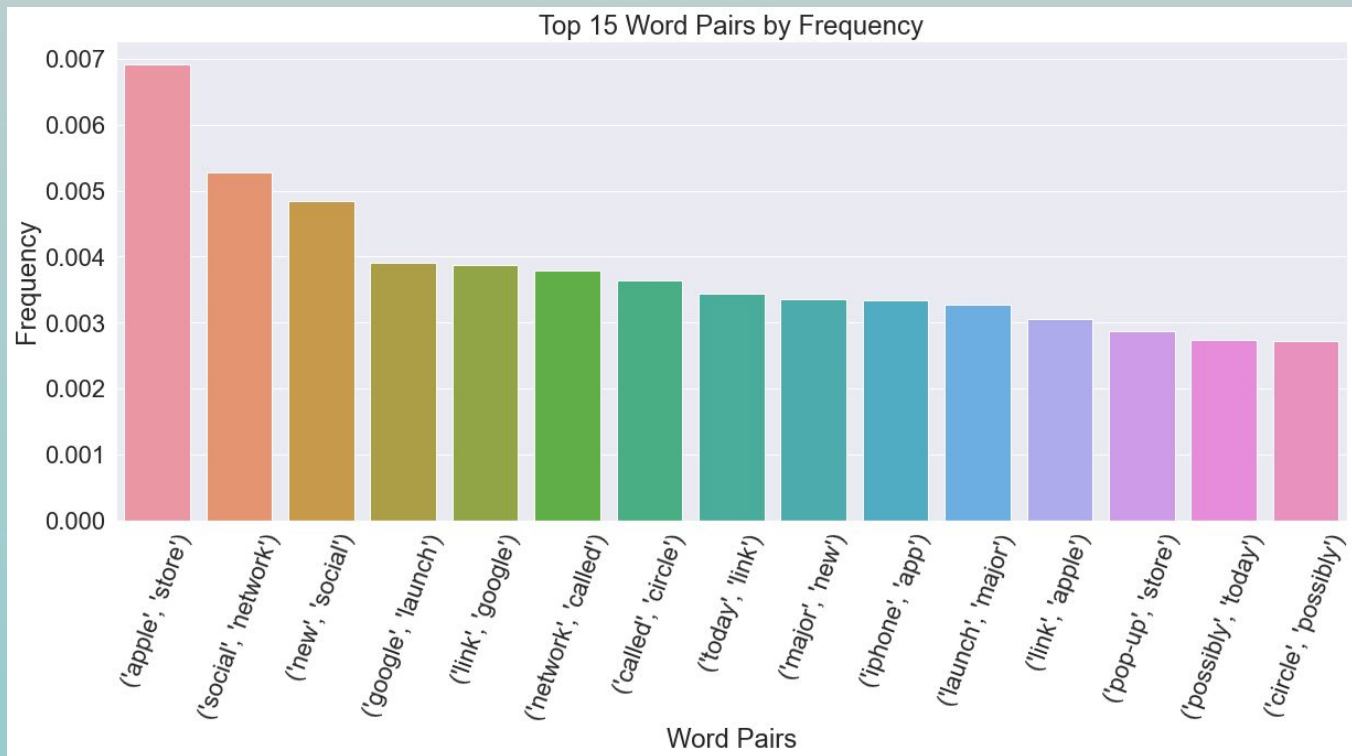


Overall Insights - Supervised Learning

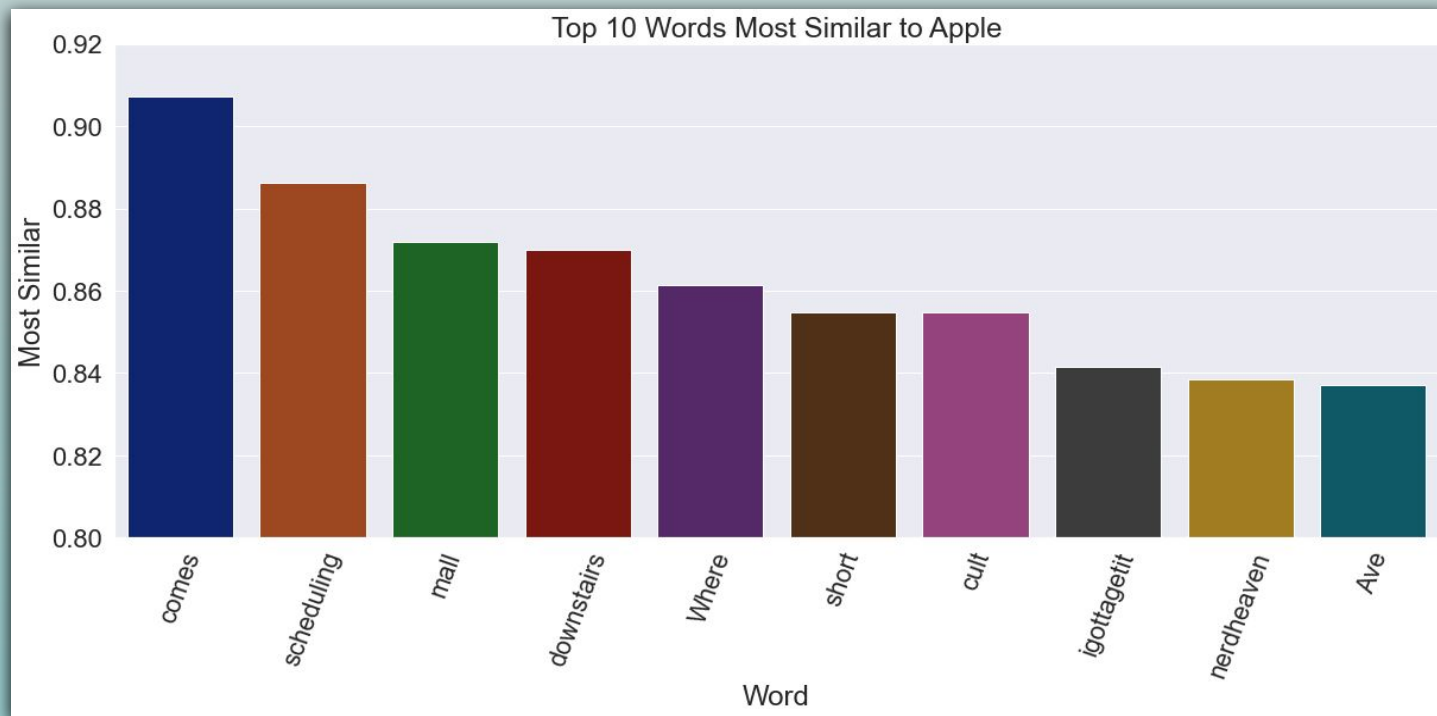
- Using a multiclass classification sequential Deep Neural Network model, achieved 81.5% (99.8% training accuracy) accuracy on the test data for 4 classes of Tweets -
- Ambiguous
- Negative
- No emotion toward brand or product
- Positive




Insights from Tokenization and Bigrams



Insights using Word2Vec



Future Work

- Continue to separate iPhone OS and Android OS tweets to look at different behaviors and word usage of those two groups
 - Use Spacy NLP to look at Parts of Speech tagging of the bag of words
 - Explore which words have the *most* positive and *most* negative connotations in tweets
 - Improve multiclass model and create graphics to show the model performance.
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A spiral-bound notebook with a white cover and lined pages is positioned diagonally on a light-colored wooden surface. The words "Thank You!" are written in a large, black, handwritten-style font across the middle of the notebook. The wooden background features horizontal planks with visible grain and some minor cracking. The notebook's metal spiral binding is visible along the top edge.

Thank
You!