

NLP Analysis

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Business Problem

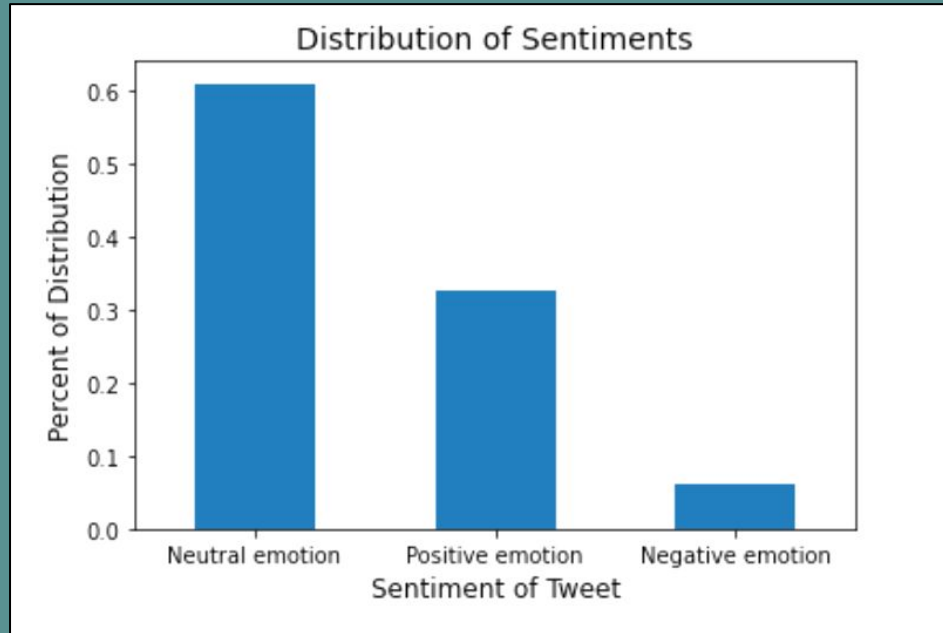
- Freelancers showcasing a model to determine a positive, negative, or neutral reaction from tweets
- Help companies determine public sentiment from tweets
- Help companies determine product sentiment in real time

Data and Methods

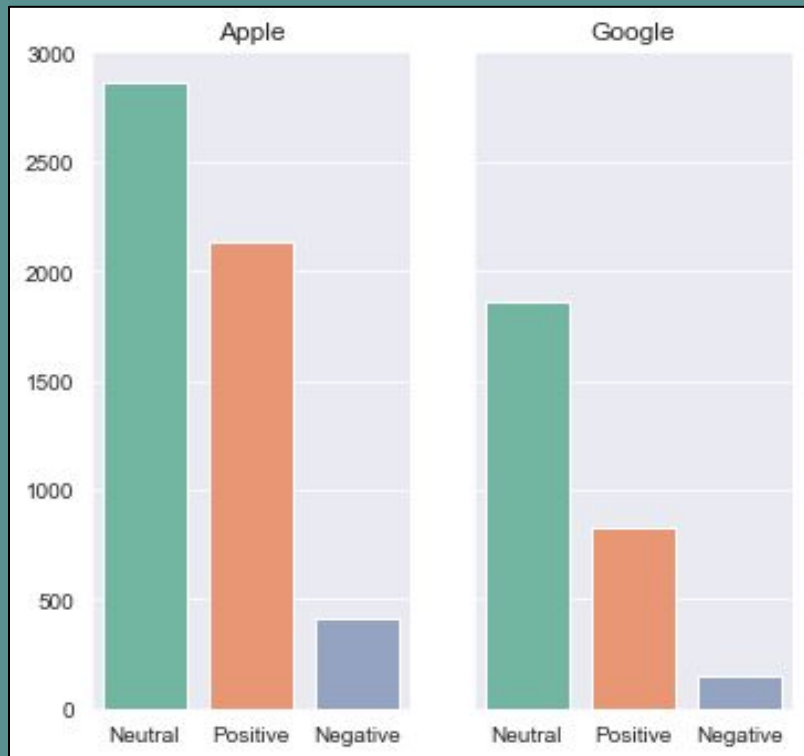


- Data from data.world
- Tweets from 2011 SXSW festival when Apple released the Ipad2
- The majority of tweets are regarding Apple and Google
- Develop model to predict sentiment reaction

Sentiment Distribution



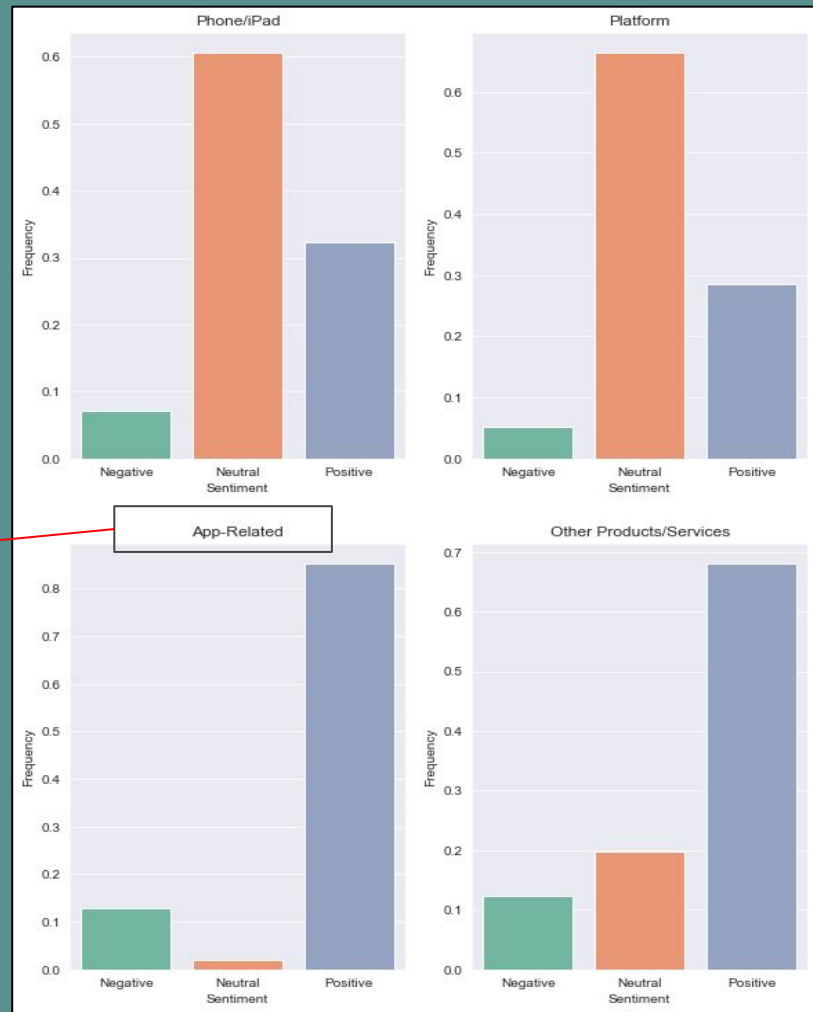
Apple vs. Google Comparison



- Apple had a greater number of overall tweets during the #SXSW festival
- Apple also had a higher number of tweets with positive emotion

Tweet Sentiment by Product Category

Apps had a much higher rate of positive tweets compared to the devices/platforms



Words with highest association to positive tweet sentiment



Positive Tweet Examples



Lauren Rae Bertolini

@mslaurenrae

...

If you aren't at google you just missed the dance party of a lifetime [#SXSW](#)

12:06 AM · Mar 14, 2011 · Twitter for iPhone



Brian Rutledge

@brianrutledge

...

Temporary Apple store at SXSW is really cool...as is the iPad 2 :) [#apple](#) [#SXSW](#) [#fanboy](#)

7:00 PM · Mar 11, 2011 · Twitter for iPad

Words with highest association to negative tweet sentiment



Negative Tweet Examples



Lindsay
@LindsayBL



Disgusted with my iPhone's battery life. Already down to 11% at 3:30 pm while my blackberry is going strong.
[#Sxsw](#)

4:37 PM · Mar 12, 2011 · Twitter for iPhone



Sarah Oyungu
@mizdiva

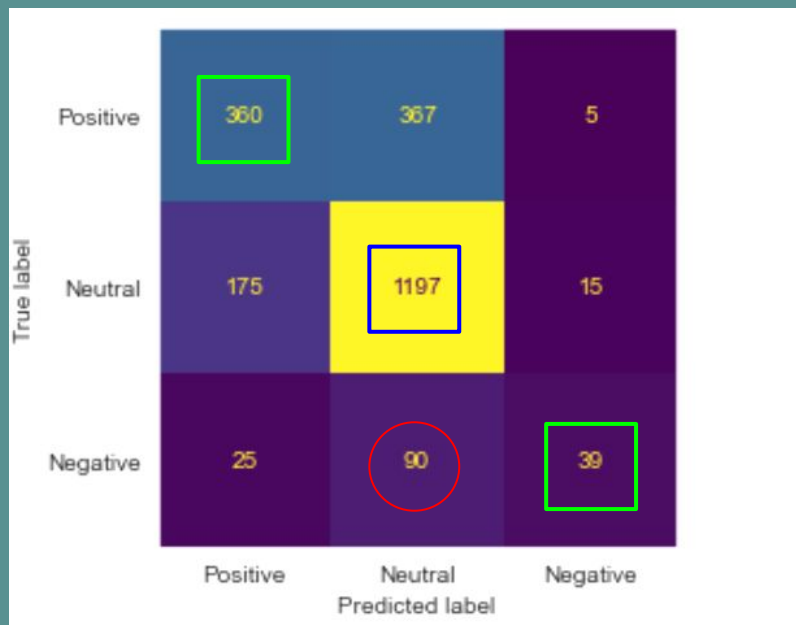


Come on [#Apple](#)! Why cant I have spell-checking without auto-correct? Must it be all or nothing? [#Grrr](#)
[#sxsw](#)

1:27 PM · Mar 15, 2011 · Twitter for iPad

Final Model

TFIDFVectorizer with SVC Classifier, 70% accuracy





Conclusions

- Determine sentiment of product quickly after release
- Identify problems not directly reported to company
- Provide quicker feedback than relying on actual reviews
- Can be used to make improvements on events that happen annually



Next Steps

- Gather more negative tweets for training purposes
- Investigate other forms of social media (Instagram, Facebook, etc.)
- Further analysis of how sentiment rated by human



Thank you!

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