Natural Language Processing Case Study

Emotional Association with tweets

Overview

- Over the past few weeks, we were tasked with identifying and creating a model which would help predict and interpret tweets that were negative, positive or neutral about a product.
- 9k+ data entries

Agenda

- Common Words
- Our Model
- Associative Words & Emotion

	Word	Freq
0	(rt, mention)	0.008641
1	(ipad, 2)	0.008413
2	(.rt, mention)	0.006329
3	(mention, mention)	0.005862
4	(apple, store)	0.005349
5	(link, .rt)	0.004597
6	(mention, google)	0.004435
7	(social, network)	0.004302
8	(new, social)	0.003930
9	(link, mention)	0.003131
10	(network, called)	0.003103
11	(called, circles)	0.002960
12	(mention, apple)	0.002788
13	(major, new)	0.002760
14	(iphone, app)	0.002712
15	(launch, major)	0.002684
16	(today, link)	0.002608
17	(link, via)	0.002465
18	(mention, rt)	0.002284
19	(google, launch)	0.002256

Common Words

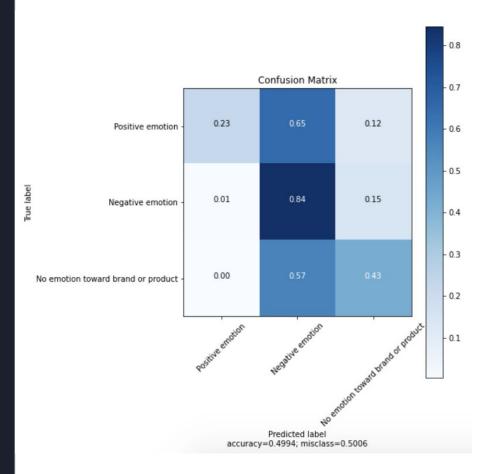


Common Hashtags



Our Model

 Model Sensitivity tailored towards negative tweets



Associative Words & Emotion

Key:

- 0 = Negative Emotion
- 1 = Neutral Emotion
- 2 = Positive Emotion

Findings:

- Fail
- Cool
- Design

	0	1	2
cool	0.029586	0.183432	0.786982
#ipad2	0.027211	0.530612	0.442177
design	0.121212	0.632035	0.246753
line	0.045833	0.635417	0.318750
#fail	0.523810	0.333333	0.142857
via	0.032634	0.652681	0.314685
launch	0.035409	0.728938	0.235653
free	0.005391	0.684636	0.309973
long	0.177570	0.570093	0.252336
today	0.036778	0.767075	0.196147
like	0.124224	0.503106	0.372671
circles	0.047771	0.769108	0.183121
deleting	1.000000	nan	nan
social	0.050938	0.743968	0.205094
#apple	0.039906	0.532864	0.427230
headaches	0.545455	0.363636	0.090909
austin	0.027572	0.663839	0.308590
new	0.049117	0.636224	0.314658
great	0.045455	0.340909	0.613636
store	0.033265	0.595384	0.371351
арр	0.065164	0.518839	0.415998
google	0.055624	0.660486	0.283890
2	0.046875	0.550521	0.402604
apple	0.055186	0.540438	0.404377
rt	0.048679	0.615577	0.335744
iphone	0.105400	0.539362	0.355237
@mention	0.050331	0.624275	0.325394
ipad	0.066737	0.508828	0.424435
#sxsw	0.063858	0.602846	0.333296
link	0.024367	0.686369	0.289264

Recommendations

Look deeper into tweets that include words like "design"

- Strengthen / fine tune model to associate with your products

Use that to pay attention to what works

Future Work

- Hashtag deepdive

 Pulling more data from tweets associated with tech

Thank You

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