# Natural Language Processing Case Study Emotional Association

### 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**

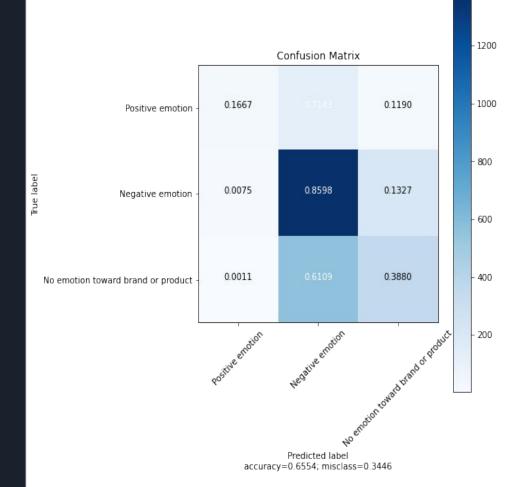


## **Common Hashtags**



### 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
party	0.017341	0.612717	0.369942
design	0.121212	0.632035	0.246753
time	0.075075	0.474474	0.450450
get	0.050987	0.541118	0.407895
free	0.005391	0.684636	0.309973
like	0.124224	0.503106	0.372671
fail	0.500000	0.304348	0.195652
android	0.042105	0.610526	0.347368
launch	0.035409	0.728938	0.235653
line	0.045833	0.635417	0.318750
cool	0.029586	0.183432	0.786982
today	0.036778	0.767075	0.196147
social	0.050938	0.743968	0.205094
circles	0.047771	0.769108	0.183121
рор	0.028536	0.604218	0.367246
ipad2	0.038298	0.502128	0.459574
amp	0.024221	0.705882	0.269896
great	0.045455	0.340909	0.613636
quot	0.098997	0.619048	0.281955
austin	0.027572	0.663839	0.308590
new	0.049117	0.636224	0.314658
арр	0.065164	0.518839	0.415998
store	0.033265	0.595384	0.371351
google	0.055624	0.660486	0.283890
apple	0.055186	0.540438	0.404377
iphone	0.105400	0.539362	0.355237
rt	0.048679	0.615577	0.335744
ipad	0.066737	0.508828	0.424435
mention	0.050269	0.624328	0.325403
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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