



# NEW. BUT NOT BORN YESTERDAY.

HPE Enterprise Services and CSC are now DXC Technology.



DXC.technology | GET IT DONE.

## DXC.technology Opinion on HPE ES - CSC Merger

Sentimental Analysis using  
Twitter Data

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April 2017

# Overview:

- ✓ Twitter.com is a popular micro blogging website.
- ✓ Posts in twitter are called as tweets.
- ✓ Each tweets is 140 characters in length.
- ✓ Tweets are frequently used to express the tweeter's emotion on a particular subject.
- ✓ Sentiment - A thought, view, or attitude based mainly on emotion instead of reason.
- ✓ Sentiment Analysis (or opinion mining) - Use of natural language processing (NLP) and computational techniques to automate the extraction or classification of sentiment from typically unstructured text.

# Tasks & Tools:

- ✓ Extract and clean the data from twitter.
- ✓ Compare tweets against a list of positive and negative words.
- ✓ Polarity Classification – Positive, Negative and Neutral.
- ✓ Classify tweets based on two sentiments – Positive and Negative.
- ✓ Classify tweets based on eight emotions – anger, fear, anticipation, trust, surprise, sadness, joy, and disgust.
- ✓ Programming Language R used for extraction, analysis, classification of tweets and graphical representation (plots).

# Popular retweets:

## HPE

22

CSC and @HPE Services division complete merger to form @DXCTechnology  
#HelloDXC #Cloud #CloudComputing #IoT

@DXCTechnology: .@DanHushon and Mike Nefkens talk to @CRN about @AWS opportunity and @HPE relationship.

15

## CSC

33

RT @Nickpanayi: Out with the old, in with the new. Goodbye @csc.\nIt's almost #helloDXC time!

RT @lisapettigrew: A bell is ringing April 3, 2017 at 9:30 am ET. Get ready to Thrive on Change! #HelloDXC @CSC

22

## DXC

293

RT @DXCTechnology: Hello @NYSE! #HelloDXC. Retweet if you're ready to Thrive on Change! <https://t.co/Gpf3sgJju6>



RT @DXCTechnology: This just happened. #HelloDXC! <https://t.co/ZOvGrJ7mF5>

227



# Most liked tweets (favorites):

HPE

CSC and @HPE Services division complete merger to form @DXCTechnology  
#HelloDXC #Cloud #CloudComputing #IoT... <https://t.co/Drylj3hi0Z>

24



.DXCtechnology and @HPE celebrating the service award received by Senator John McCain from Vet Jobs Mission. @sgraye <https://t.co/vchiFJkvhw>

23

DXC

Today two operations officially merged into one of the largest IT-solutions providers on the planet: @DXCTechnology <https://t.co/miylbzRfb6>

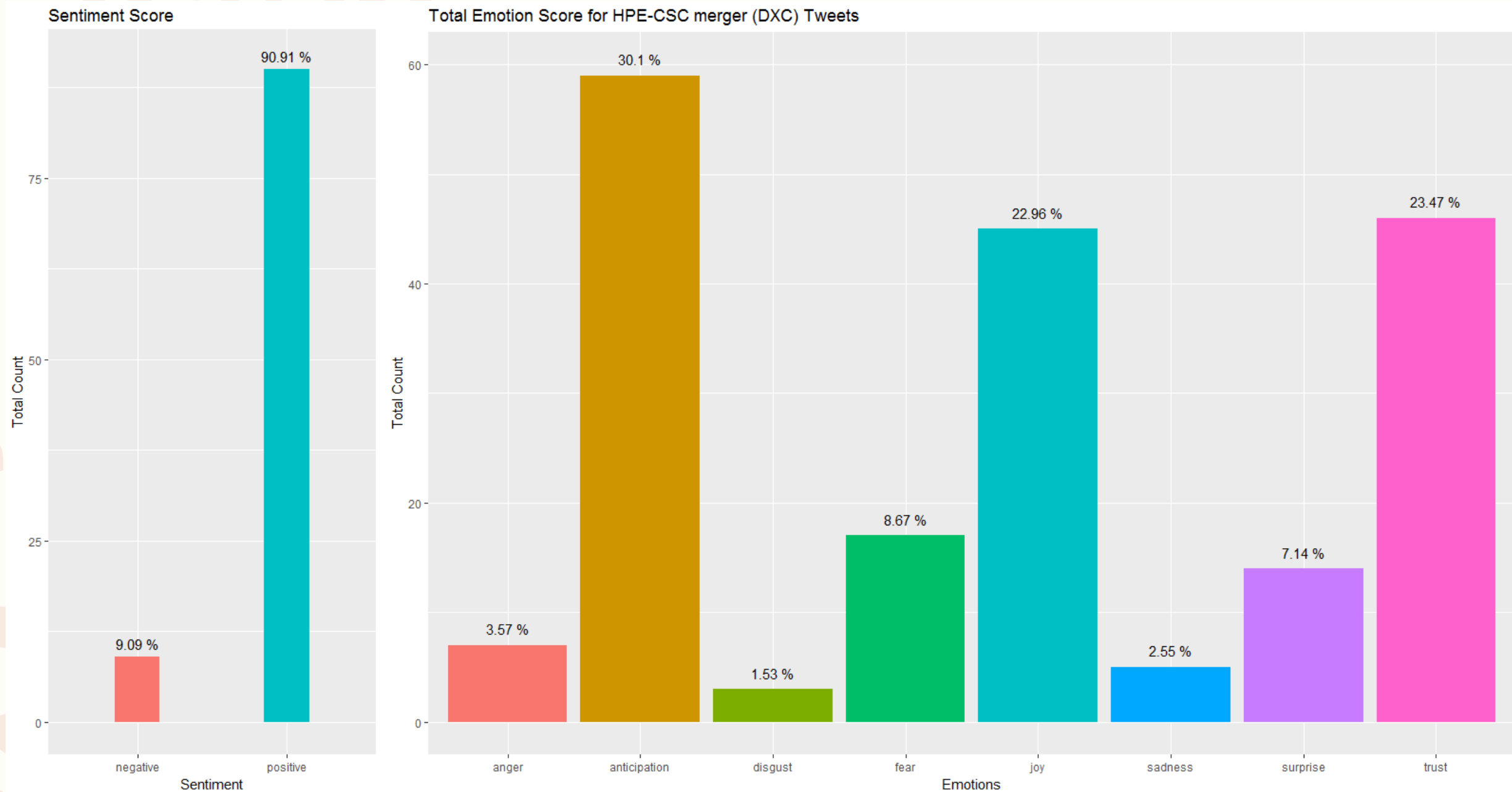
399



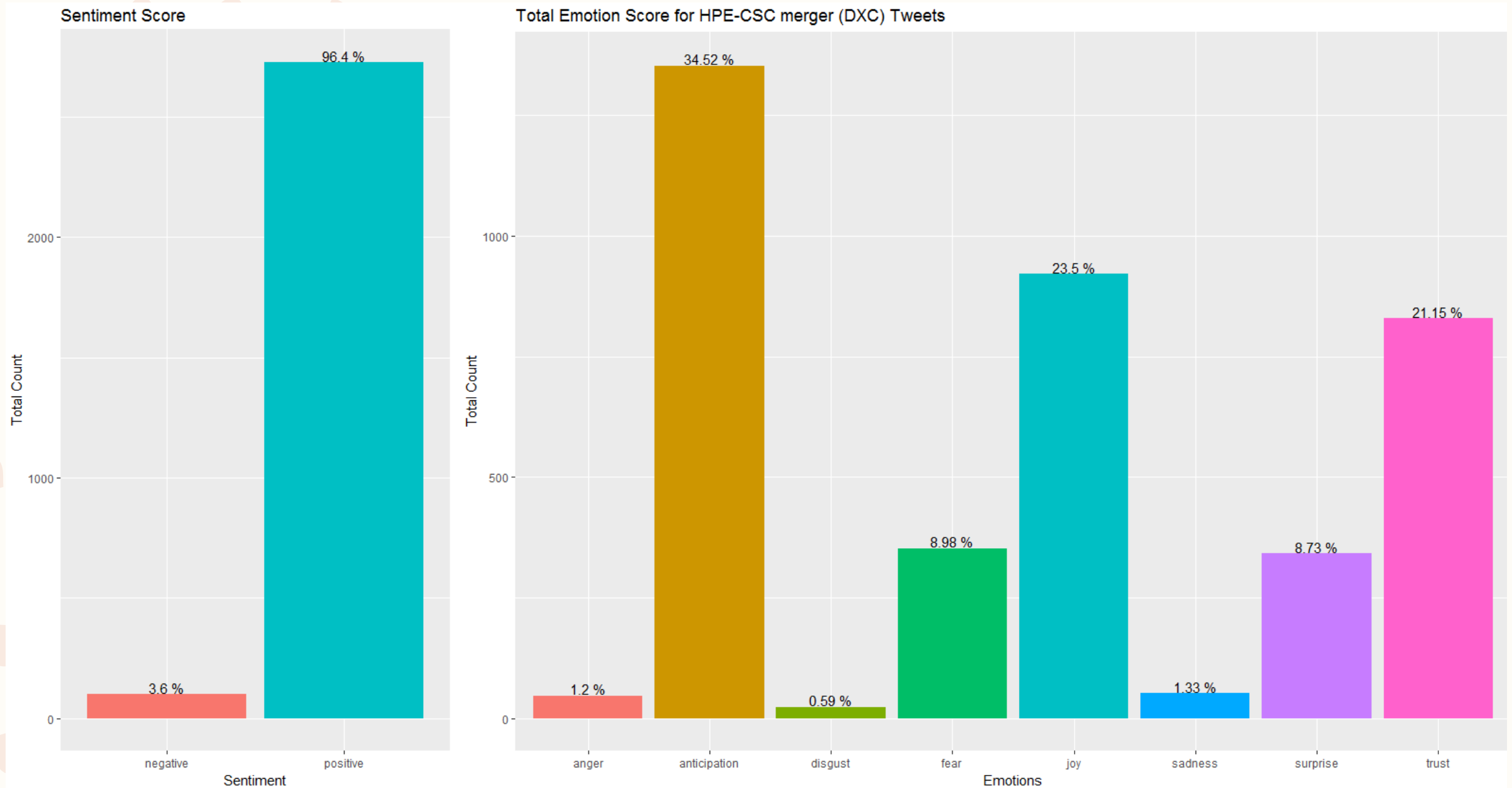
DXC Philippines! Day 1 #MabuhayDXC #IamDXC #IseeDXC #HelloDXC guys help nman ako to like this photo! Thanks!... <https://t.co/4gC3lXkKAX>

187

# Sentiments, Emotion Score - First Week of Merger



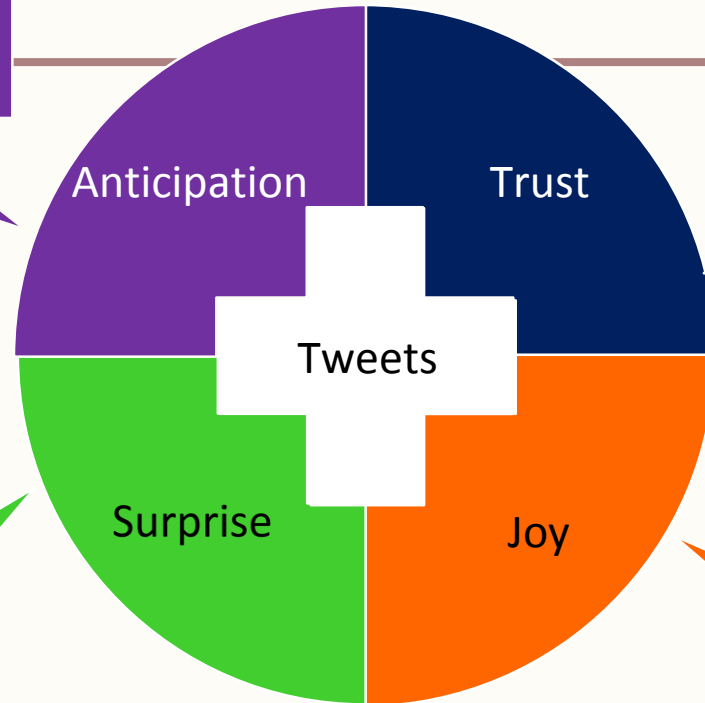
# Sentiments, Emotion Score - Mid-April - 2017



# Positive Emotions

- As we approach Day 1, energy, enthusiasm and hard work continues...\n#HelloDXC #IamDXC @CSC @HPE Merger #DXCTechnology
- New beginnings tomorrow as we wake up and become DXCTechnology CSC change growth innovation excited
- Look forward to tomorrow. Same as every Monday except @HPE will be a competitor tomorrow rather than my employer. #DXC

- @DXC.technology Trust, transform and thrive with the power of our combined strengths to enable your successful digital journey!
- #HelloDXC #DXCTechnology All the best to all stake holders involved.Hope it reaches the goal of industry leading services provider @CSC @HPE
- #IamDXC #hellodxc Coming soon As a Leader in providing end-to-End IT solutions @CSC @HPE <https://t.co/pdMI5llxD4>



- Final 2 days of CSC exciting times ahead DXCTechnology
- @Nickpanayi @CSC #HelloDXC you are lucky to witness this at Tyson's - please post a Day and Night pic after installation <https://t.co/scllkFqNi6>

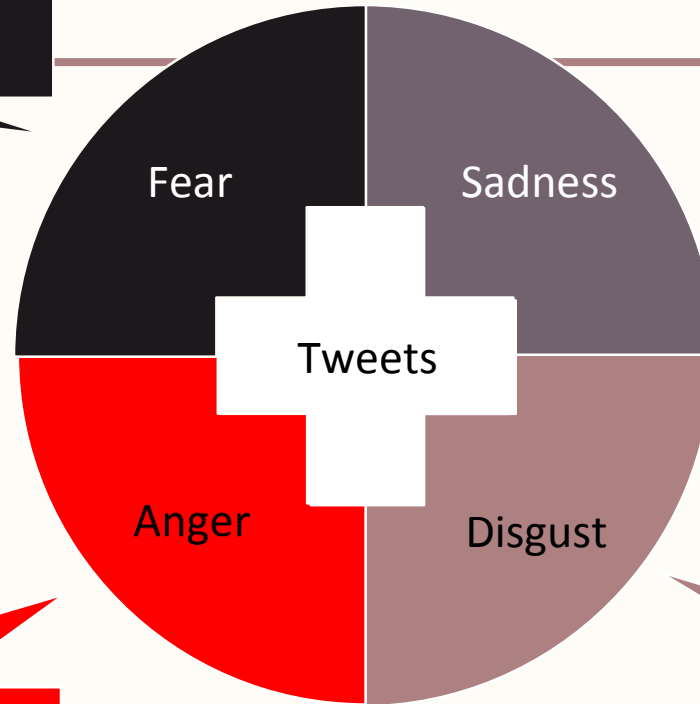
- RT @ChrisFangmann: Exciting times; great workshops w/ @CSC customers while in parallel preparing merger w/ @HPE\_Services to found a great n
- Nostalgic to use CSC for last time Thankyou CSC for wonderful memories n enriching journey Ready for newCo HelloDXC ThriveOnChange



# Negative Emotions

- @Nickpanayi @CSC @CSC\_UK Can't accept your challenge, no sweets! But, we'll have the best cup cakes of any location! #BringItOn #HelloDXC

- #CSC #DXC #Greedy #MikeLawrie gets approx \$40m while 100's UK workers lose jobs. @CSC UK companies' best not do business with them!



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# Lexicons – Methods

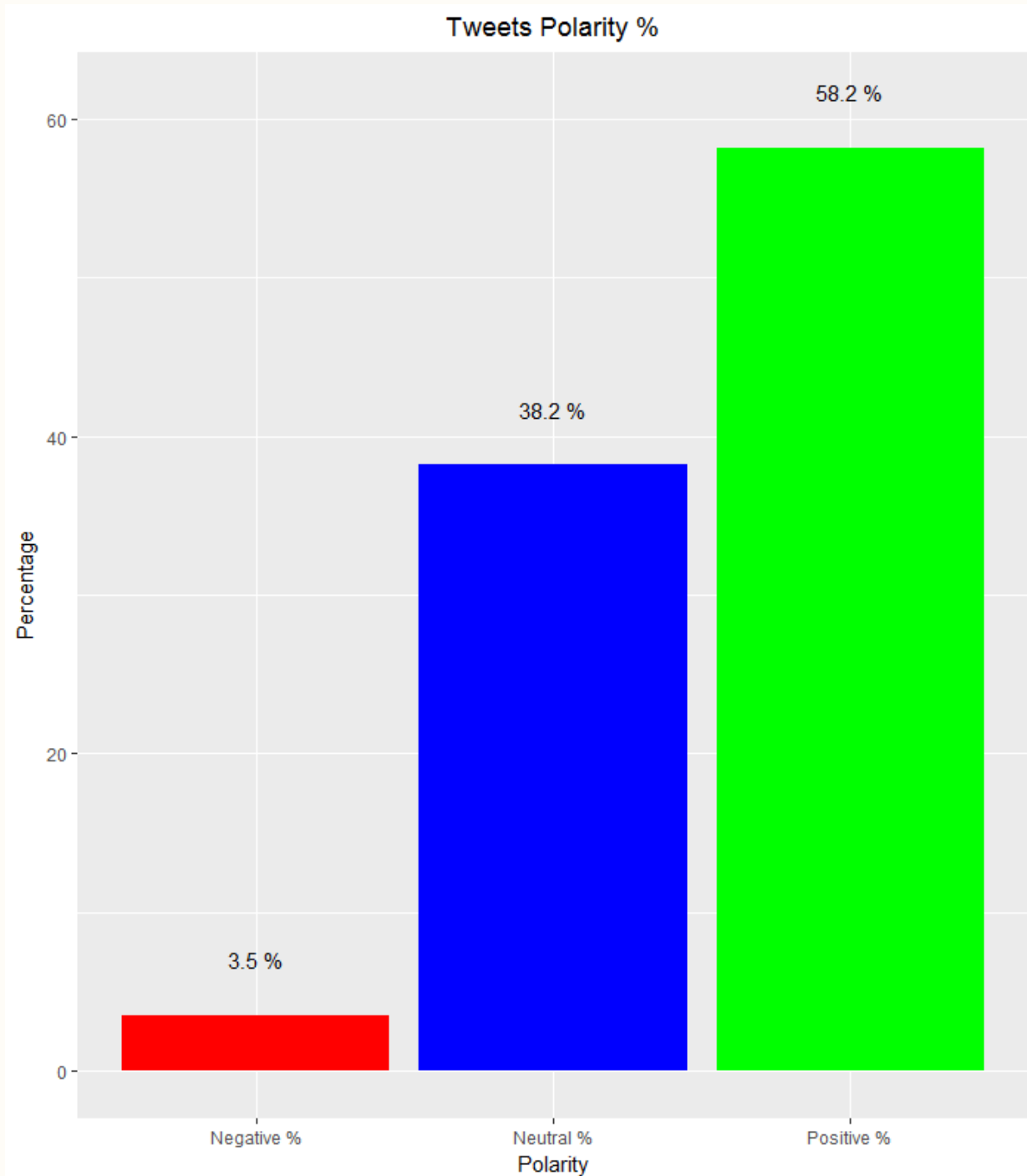
nrc

bing

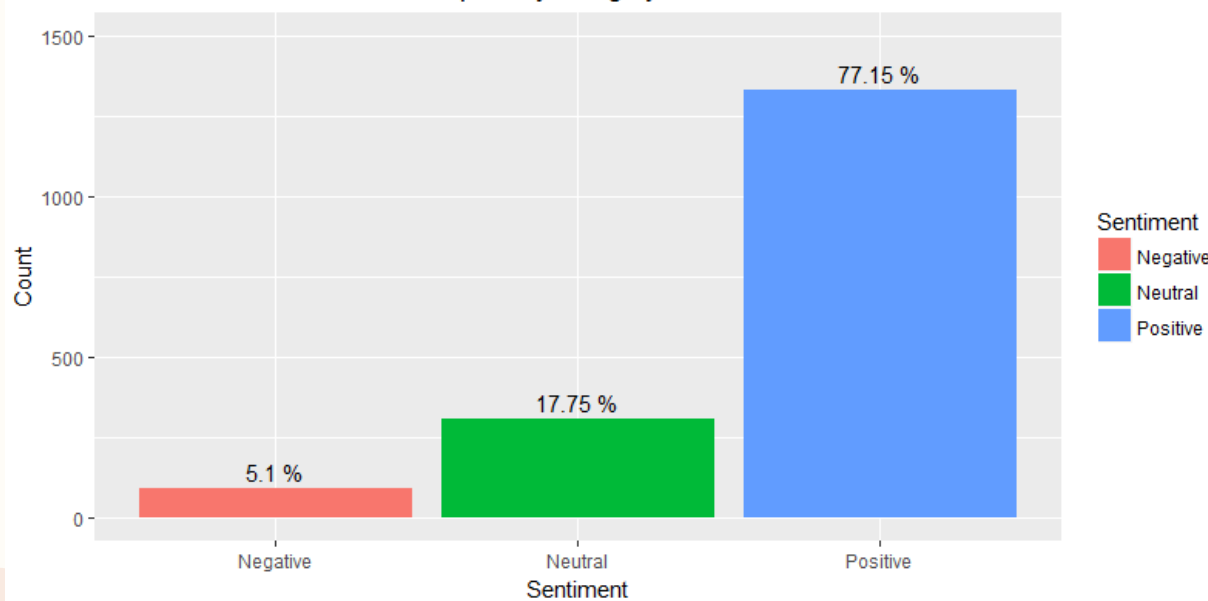
afinn

syuzhet

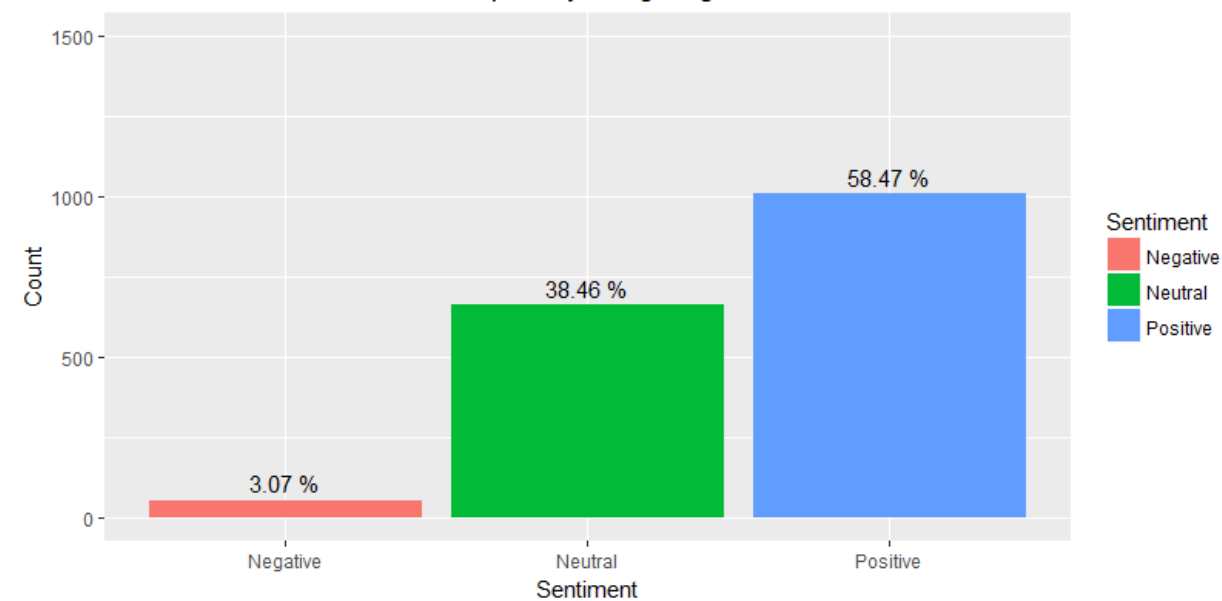
stanford



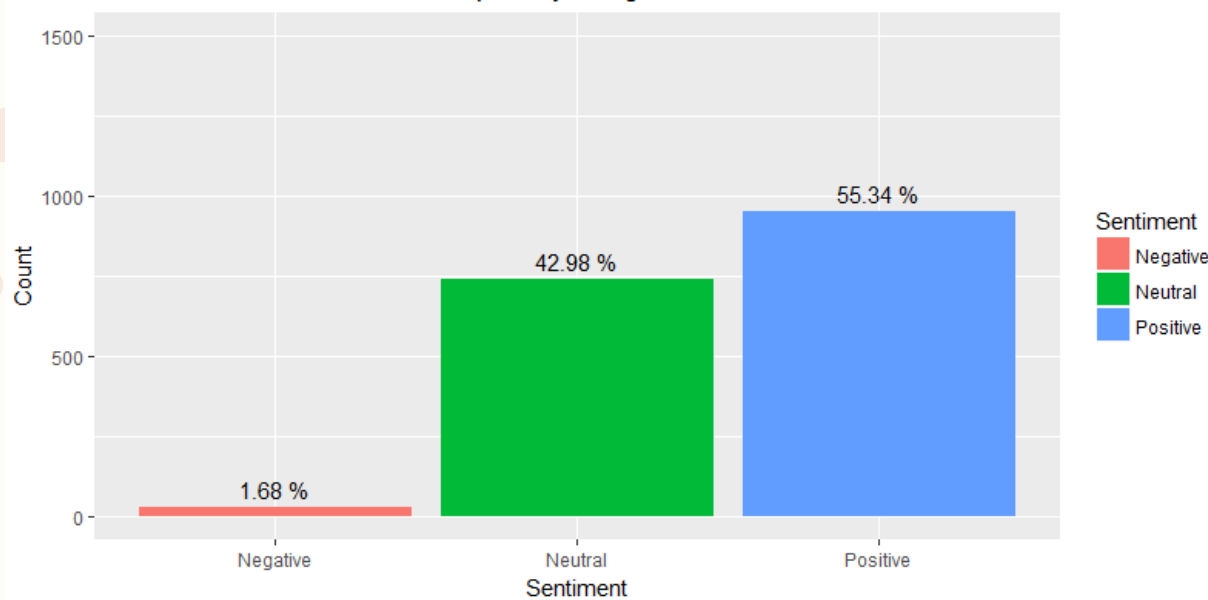
Sentiment polarity using syuzhet method



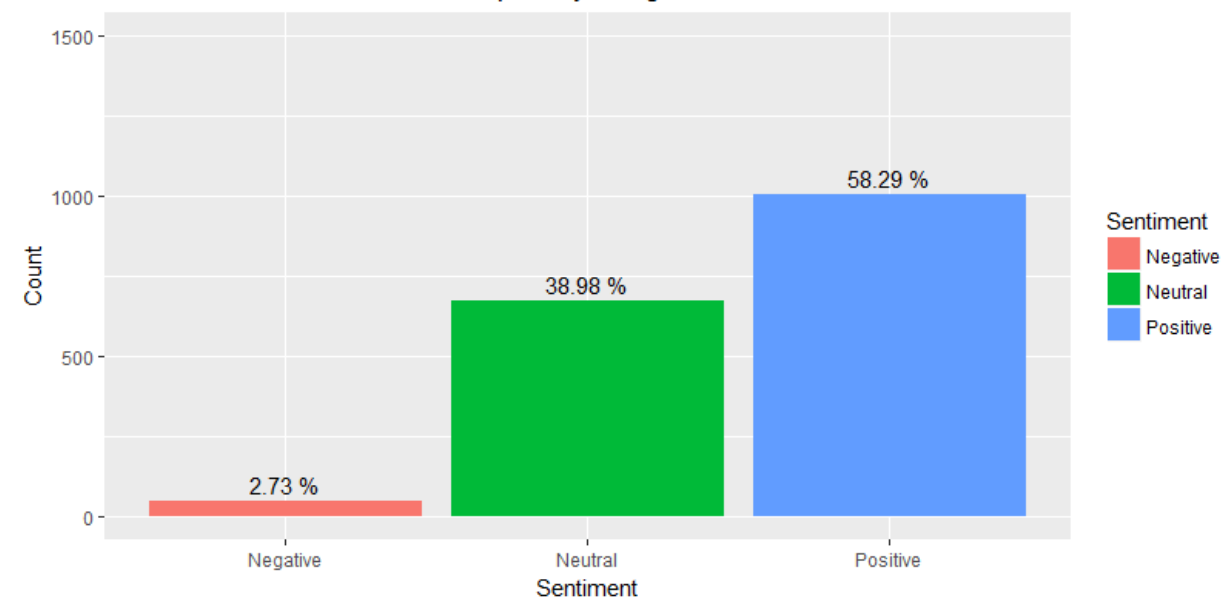
Sentiment polarity using bing method



Sentiment polarity using afinn method



Sentiment polarity using nrc method



## bing

word	value
a+	1
abound	1
abounds	1
abundance	1
abundant	1
accessible	1
accessible	1
acclaim	1
acclaimed	1
acclamation	1
accolade	1
accolades	1
accommodative	1
acomodative	1
accomplish	1
accomplished	1
accomplishment	1
accomplishments	1
accurate	1
accurately	1

## NRC

word	anger	anticipation	disgust	fear	joy	negative	positive	sadness	surprise	trust
abundance	0	1	1	0	1	1	1	0	0	1
accelerate	0	1	0	0	0	0	0	0	0	0
accolade	0	1	0	0	1	0	1	0	1	1
accompaniment	0	1	0	0	1	0	1	0	0	1
achievement	0	1	0	0	1	0	1	0	0	1
acquiring	0	1	0	0	0	0	1	0	0	0
addresses	0	1	0	0	0	0	1	0	0	0
adore	0	1	0	0	1	0	1	0	0	1
adrift	0	1	0	1	0	1	0	1	0	0
advance	0	1	0	1	1	0	1	0	1	0
advent	0	1	0	0	1	0	1	0	0	1
adventure	0	1	0	0	0	0	1	0	0	0
advocacy	1	1	0	0	1	0	1	0	0	1
airport	0	1	0	0	0	0	0	0	0	0
alertness	0	1	0	1	0	0	1	0	1	0
alerts	0	1	0	1	0	0	0	0	1	0
alive	0	1	0	0	1	0	1	0	0	1

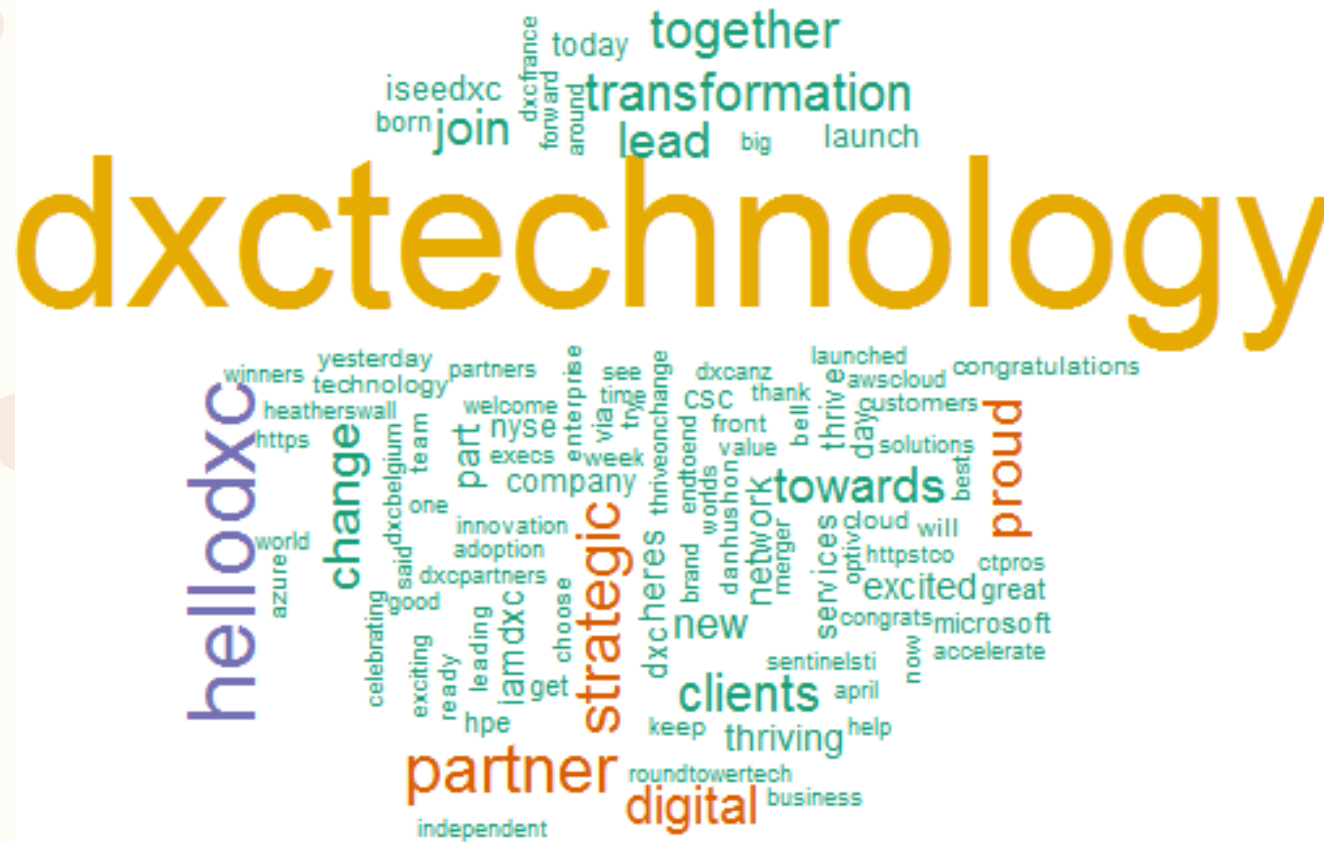
## syuzhet

word	value
abandon	-0.75
abandoned	-0.5
abandoner	-0.25
abandonment	-0.25
abandons	-1
abducted	-1
abduction	-0.5
abductions	-1
aberrant	-0.6
aberration	-0.8
abhor	-0.5
abhorred	-1
abhorrent	-0.5
abhors	-1
abilities	0.6
ability	0.5
abject	-1

## afinn

word	value
abandon	-2
abandoned	-2
abandons	-2
abducted	-2
abduction	-2
abductions	-2
abhor	-3
abhorred	-3
abhorrent	-3
abhors	-3
abilities	2
ability	2
aboard	1
absentee	-1
absentees	-1
absolve	2
absolved	2
absolves	2
absolving	2
absorbed	1
abuse	-3
abused	-3
abuses	-3
abusive	-3

# Word Cloud







A word cloud featuring the phrase "Thank You" in numerous languages and scripts. The words are arranged in a dense, overlapping manner, with "THANK YOU" being the most prominent in the center. Other visible words include "GRACIAS", "ARIGATO", "SHUKURIA", "GOZAIMASHITA", "EFCHARISTO", "FAKRAUE", "KOMAPSUMNIDA", "MAAKE", "LAH", "GRAZIE", "MEHRBANI", "PALDIES", "BOLZİN", "MERCİ", "BİYAN", "SHUKRIA", "TINGKI", "YUSPAGARATAM", "HUI", "UNALCHÉESH", "SİKOMO", "MAKETAI", "MIMMONCHAR", "TAVTAPUCH", "MEDAWAGSE", "BAIKA", "JUSPAXAR", "DANKSCHEEN", "SPASSIBO", "SNACHALHUYA", "NUHUN", "CHALTU", "YAQHANYELAY", "WABEEJA", "MAITEKA", "DHANYABAAD", "ANHA", "ATTO", "MERCI", "DENKAUJA", "NENACHALHYA", "HATUR", "SI", "EKOJU", and "SUKSAMA EKHMET". The colors are primarily black and white, with some words in red and blue.