

# Business Analytics and Data Driven Decision Making

## Session#10: Lecture#20: Text Analytics: Business Cases

### Ravi Vatrapu

*Director, Centre for Digital Enterprise Analytics and Leadership (DEAL)*

*Loretta Rogers Research Chair in Digital Enterprise*

*Professor, School of Information Technology Management*

*Ted Rogers School of Management*

*Toronto Metropolitan University, Canada*

*Founding Director, Centre for Business Data Analytics ([bda.cbs.dk](http://bda.cbs.dk))*

*Professor (on leave), Copenhagen Business School, Denmark*

*Visiting Professor, Indian Institute of Management Visakhapatnam, India*

*Honorary Visiting Professor, GITAM Deemed University, India*

*Adjunct Faculty, Indian Institute of Management Rohtak, India*

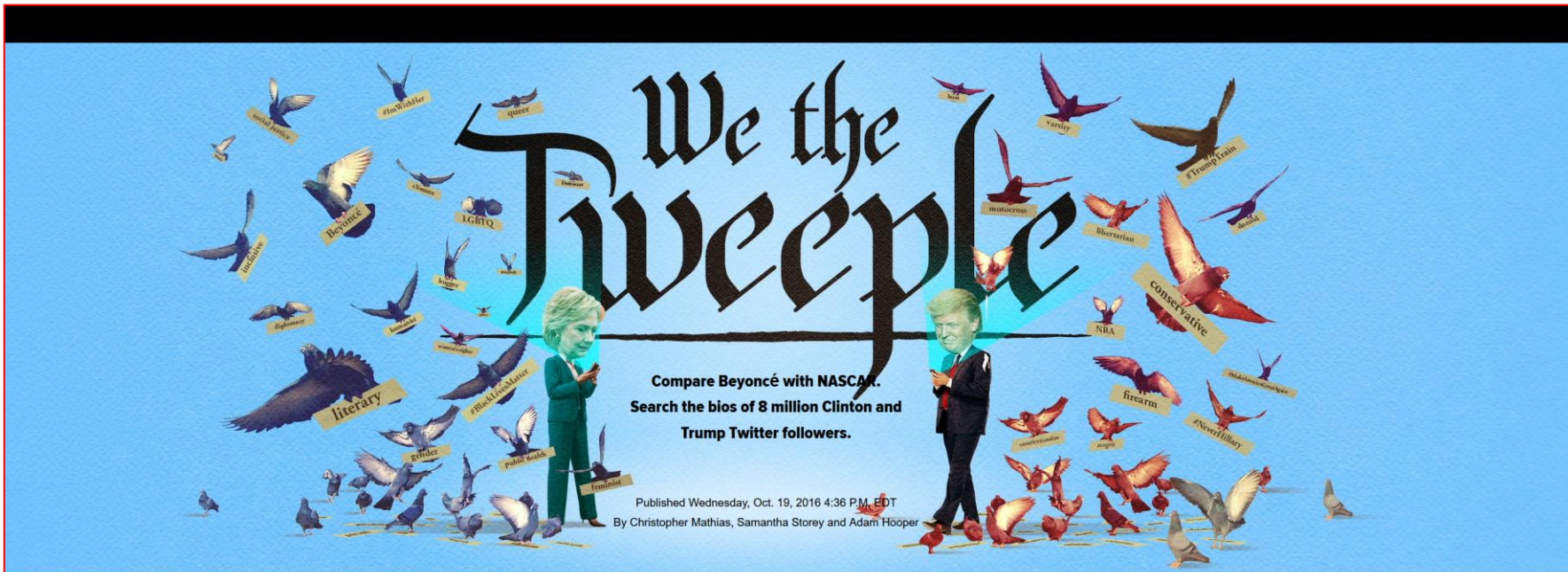
Email: [vatrapu@torontomu.ca](mailto:vatrapu@torontomu.ca)

DEAL Website: <https://www.torontomu.ca/tedrogersschool/digital-enterprise-analytics-and-leadership/>

Faculty Webpage: <https://www.torontomu.ca/information-technology-management/faculty-research/ravi-vatrapu/>



# **Social Associations**



Type a word...



Pick a word, any word, or click a bird

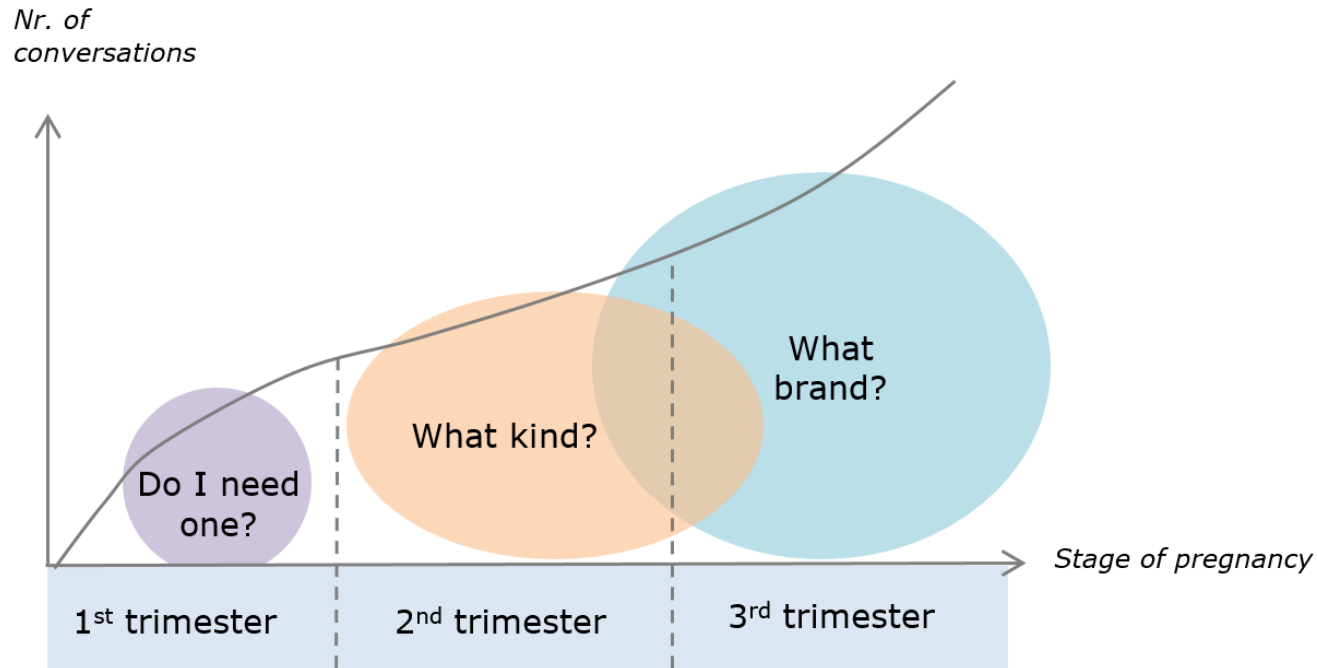


<https://data.huffingtonpost.com/2016/we-the-tweeple>

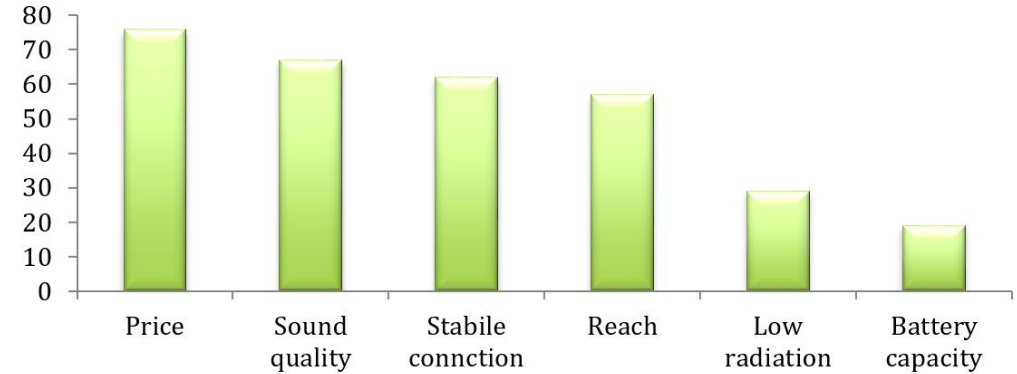
# Product Development

# Big Data Sets → Business Assets

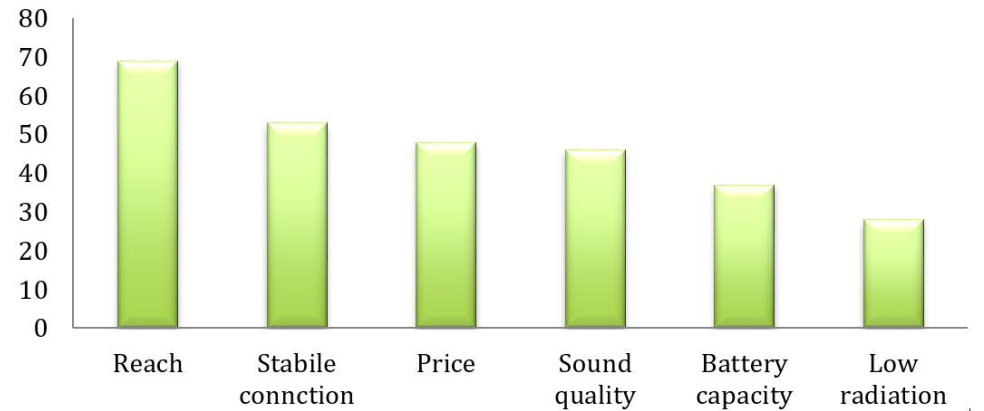
## Case: Product: Baby-Monitors



The most important criteria as a parent to be



The most important criteria as an experienced parent



# Quality Control

# Business Data Analytics: AS IS

**Sports Wireless Bluetooth Headset Carrying Case, Fit Jabra Sport Plus, Pulse, Step, Rox, Sony MDRAS200, MDR-J10, MDR-AS200 / Sweat Proof Wireless**  
 \$9.73 | In Stock. Sold by GeekriaDirect and Fulfilled by Amazon. Gift-wrap available.

See all verified purchase reviews

**Top customer reviews**

★★★★★ **Perfect!!!**  
 By B. B. Sizemore on March 4, 2017  
 Color: Pink | **Verified Purchase**

I bought 3 of these in different shapes and sizes...one to hold my ipod, one to hold my wireless earphones and one to hold my wired earphones. They work great!!! You just have to measure what you want to store in them in order to know what size to order. It keeps my earphones tangle free. I know by the shape of the case what is in each one so when I get to the Y I pull out the one(s) I want to use.

Comment | Was this review helpful to you?   Report abuse

★★★★☆ **Useful-ish**  
 By Sarah W. on June 25, 2017  
 Color: Green | **Verified Purchase**

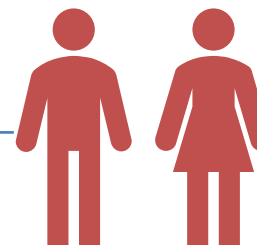
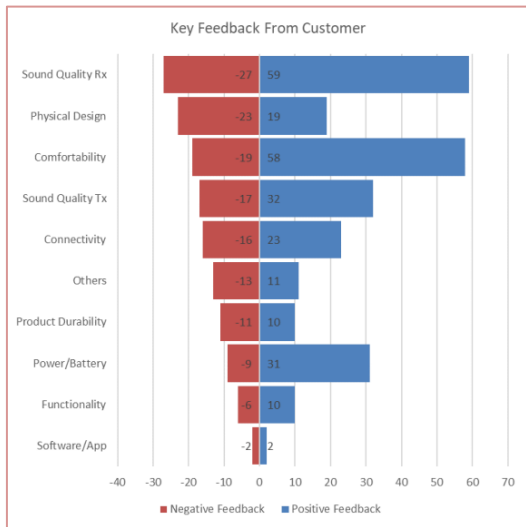
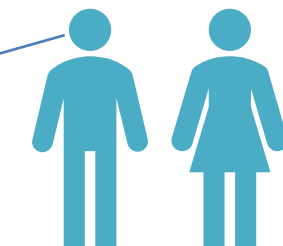
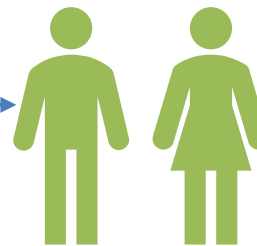
This case feels pretty cheap, and the zippers are terrible - get stuck and skip teeth every time I zip it. I use this case for my 7th gen iPod Nano, cable, and earbuds. The elastic band isn't very close to the back wall, so the iPod slides around quite a lot - I was hoping for a tighter fit. The mesh pocket is also very loose, but the cable does fit so I can't complain too much. I would not purchase this again.

Comment | Was this review helpful to you?   Report abuse

★★★★☆ **Slightly different from the image**  
 By WW on April 15, 2016  
 Color: Black | **Verified Purchase**

The size and the protection of this product is what I needed. However, the outside material is slightly different from the image. Actual product has a polyester matte feeling instead of the patterned surface. Also, the inside is orange, not black.

Comment | 3 people found this helpful. Was this review helpful to you?   Report abuse



R.No	Store	Product_Id	Review_Title	Comment	Rating	Feedback_Type	Key_Point
1	Amz US	1	I regret buying this Jabra Steel [even with huge d	I purchased this Jabra Steel after I ruined my Motorola Whisper trying to quickly rinse off some	3	0	Sound Quality Rx
2	Amz US	1	Very poor quality - failed in 30 days	I ordered this on 15 May & started using it immediately. It worked great when I first got it. On the	1	0	Sound Quality Rx
3	Amz US	1	Disappointed	No noise cancelling, did not recognize any voice commands. Returned for full refund. Surprised at	1	0	Sound Quality Rx
4	Amz US	1	Jabra Steels the Show	Bought locally for same price. I have not experience some of the issues others have with this unit	5	1	Sound Quality Rx
5	Amz US	1	Edit: Volume is too low in noisy environments. DO	Edit: I finally had an opportunity to use this in a high noise environment and it is WORTHLESS! I fin	1	0	Sound Quality Rx
6	Amz US	1	Doesnt live up to performance claims	I have had this product for just over a month and the battery wont stay charged. The volume level	1	0	Sound Quality Rx
7	Amz US	1	held up nicely. I called customer care and they ha	I am impressed with the noise reduction and the rugged build and I would have given at least 3 st	2	1	Sound Quality Rx
8	Amz US	1	Simply Awesome	Week One product review Ive got to say Ive heard some pretty bad stuff about this one but th	5	1	Sound Quality Rx
9	Amz US	1	Simply Awesome	Week One product review Ive got to say Ive heard some pretty bad stuff about this one but th	5	0	Sound Quality Rx
10	Amz US	1	Clarity for people on the other end is excellent	For starters the steel is my first bluetooth. So take that how you will. I bought the steel becaus	4	0	Sound Quality Rx
11	Amz US	1	The size and the fit is perfect. It does take some	The size and the fit is perfect. It does take some time trying to figure out how to adjust the ear pie	4	0	Sound Quality Rx
12	Amz US	1	Everything except call waiting	The connectivity was easy. Sound quality is above average. Noise reduction wasnt as advertised bi	3	1	Sound Quality Rx
13	Amz US	1	I Dont Let 5 Year warranty fool you...	It may have 5 year warranty but I have a deep voice and that makes people on the other side of th	2	0	Sound Quality Rx
14	Amz US	1	Well Constructed but Lacks the Volume Needed for	The Jabra Steel Ruggedized Bluetooth Headset does have a more rugged build than most head	3	0	Sound Quality Rx
15	Amz US	1	One Star	Speaker volume is toooooo low	1	0	Sound Quality Rx
16	Amz US	1	comfortable design but not my first choice for a h	The Jabra Steel Bluetooth headset. For purposes of this review I used this headset with my iPh	3	1	Sound Quality Rx
17	Amz US	1	A very light but rugged headset at last...	As a good rugged bluetooth headset yes this is great. There is excellent noise cancellation/si	4	1	Sound Quality Rx
18	Amz US	1	I have to say im pretty impressed with this Jabra	I have to say im pretty impressed with this Jabra headset. Traditionally I have not had good sui	5	0	Sound Quality Rx
19	Amz US	1	A Blue-Tooth Ear piece that requires a smart phone	This ear piece uses three microphones to provide a relatively background noise free communic	4	0	Sound Quality Rx
20	Amz US	1	Good sound quality - poor button functionality	Prior to trying the Jabra Steel Ive been a user of the Jabra STEALTH which I have been very plea	3	1	Sound Quality Rx
21	Amz US	1	I Needs some improvements	This is initially a very impressive earpiece. My first impression was naturally the setup proce	2	0	Sound Quality Rx
22	Amz US	1	Good Product	Connectivity is really good ranges about 20 meters with great sound quality. Connects to my phon	5	1	Sound Quality Rx
23	Amz US	1	Really close!!	I have used Bluetooth headsets since they were first introduced. I work out doors as a marine	4	1	Sound Quality Rx
24	Amz US	1	The call quality is great. The music audio quality	The call quality is great. The music audio quality is better than I thought. Little bit uncomfortable i	4	0	Sound Quality Rx
25	Amz US	1	Firmware Update Greatly Improves Volume	Bought this headset for work and was immediately disappointed by the volume of the headset	4	0	Sound Quality Rx
26	Amz US	1	Works as Intended	This isnt the most sleek executive looking headset but it works and its very light and comfortable.	5	1	Sound Quality Rx
27	Amz US	1	Sound quality good but volume nearly inaudible re	Sound quality good but volume nearly inaudible regardless of phone or laptop settings; less co	4	1	Sound Quality Rx
28	Amz US	1	Sound quality good but volume nearly inaudible re	Sound quality good but volume nearly inaudible regardless of phone or laptop settings; less co	4	0	Sound Quality Rx
29	Amz US	1	Some great features but fails as a functional head	Purchased this from Best Buy and ended up returning after 3 days of use. It connects easily to	1	0	Sound Quality Rx
30	Amz US	1	This is just about the best	Ill be the first to admit that Im not a trade worker but there are some wonderful features abou	5	1	Sound Quality Rx
31	Amz US	1	I Dont buy if you like to be able to hear your calls	Tough and easy to use. However terrible terrible volume. Supposedly has automatic volume but w	1	0	Sound Quality Rx
32	Amz US	1	Fantastic!!!	How have I lived without this? Ive had multiple Jabra headsets and all have been great but this is	5	0	Sound Quality Rx
33	Amz US	1	Rugged and Robust.	I have often said that the Plantronics Voyager was the greatest headset Ive ever owned. That	4	0	Sound Quality Rx
34	Amz US	1	Good sound quality. Sturdy. Ugly. Has a nascent lo	Pros: Sturdy Comfortable Very good sound quality "Find the earpiece" feature Co	4	1	Sound Quality Rx
35	Amz US	1	Incoming sound is great bit outgoing?	I break ear pieces when they fall out of my ear and hit just right. So when this Jabra Steel head	4	1	Sound Quality Rx
36	Amz US	1	Good headset.	This is a item marketed by Jabra as a rugged bluetooth headset. First off Jabra is a good brai	4	1	Sound Quality Rx

# Business Process: SHOULD BE

Sports Wireless Bluetooth Headset Carrying Case, Fit Jabra Sport Plus, Pulse, Step, Rox, Sony MDRAS200, MDR-J10, MDR-AS200 / Sweat Proof Wirele  
\$9.73 | In Stock. Sold by GeekriaDirect and Fulfilled by Amazon. Gift-wrap available.

See all verified purchase reviews

**Top customer reviews**

★★★★★ Perfect!!!  
By B. B. Sizemore on March 4, 2017  
Color: Pink | Verified Purchase

I bought 3 of these in different shapes and sizes...one to hold my ipod, one to hold my wireless earphones and one to hold my wired earphones. They work great!!! You just have to measure what you want to store in them in order to know what size to order. It keeps my earphones tangle free. I know by the shape of the case what is in each one so when I get to the Y I pull out the one(s) I want to use.

Comment | Was this review helpful to you?  Yes  No Report abuse

★★★★☆ Useful-ish  
By Sarah W. on June 25, 2017  
Color: Green | Verified Purchase

This case feels pretty cheap, and the zippers are terrible - get stuck and skip teeth every time I zip it. I use this case for my 7th gen iPod Nano, cable, and earbuds. The elastic band isn't very close to the back wall, so the iPod slides around quite a lot - I was hoping for a tighter fit. The mesh pocket is also very loose, but the cable does fit so I can't complain too much. I would not purchase this again.

Comment | Was this review helpful to you?  Yes  No Report abuse

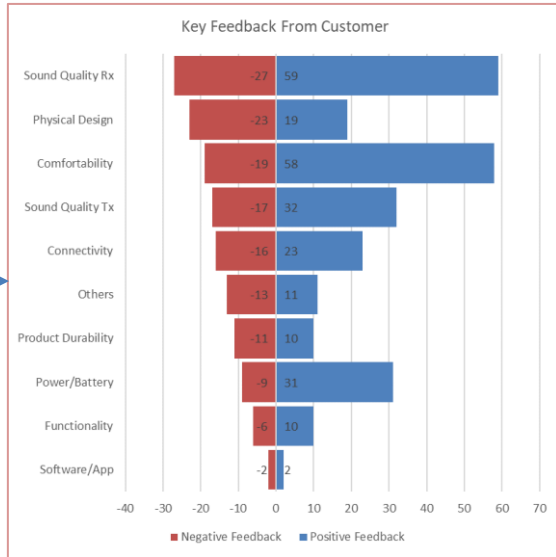
★★★★☆ Slightly different from the image  
By WW on April 15, 2016  
Color: Black | Verified Purchase

The size and the protection of this product is what I needed. However, the outside material is slightly different from the image. Actual product has a polyester matte feeling instead of the patterned surface. Also, the inside is orange, not black.

Comment | 3 people found this helpful. Was this review helpful to you?  Yes  No Report abuse

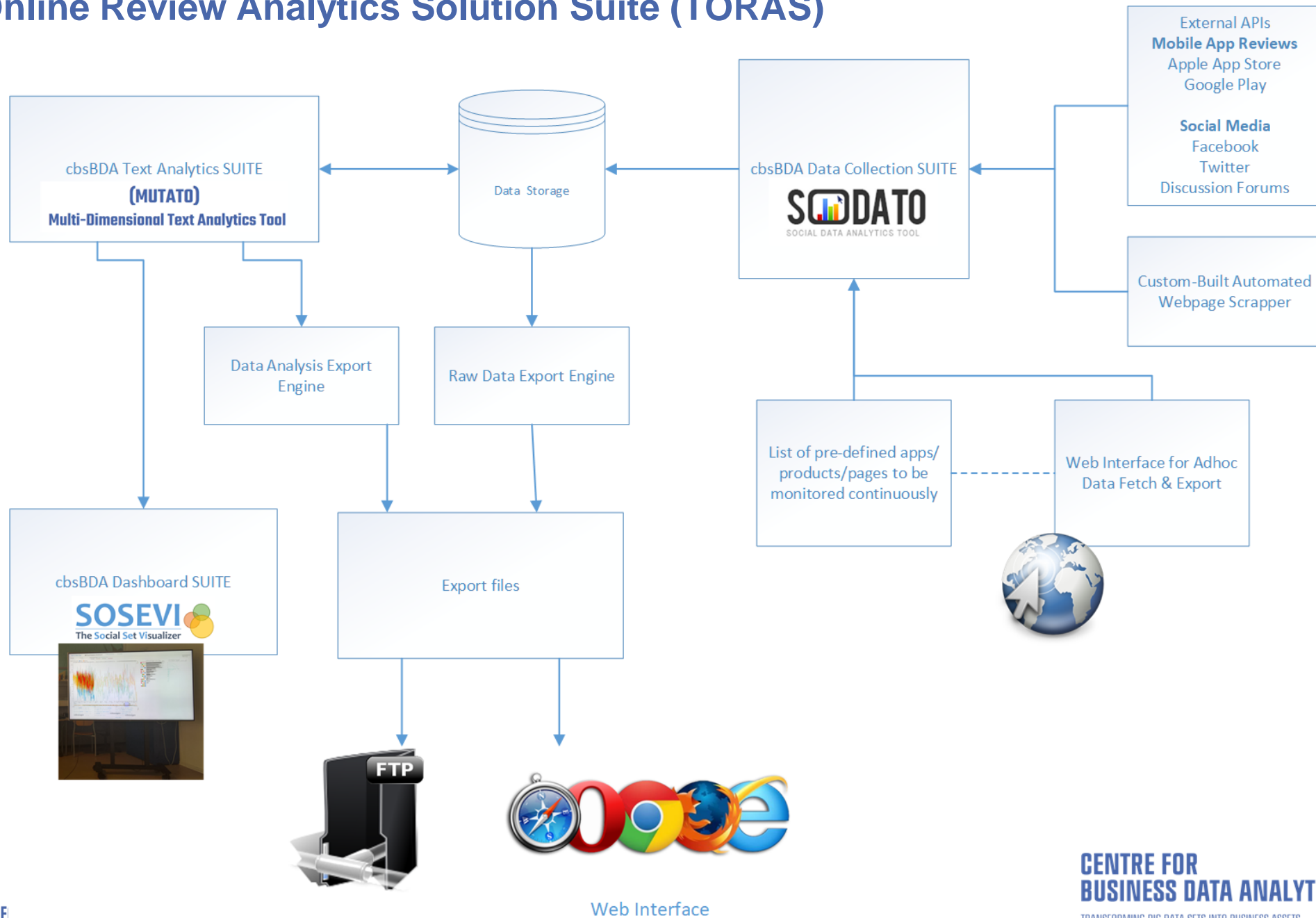


(MUTATO)  
Multi-Dimensional Text Analytics Tool



R.No	Store	Product_Id	Review_Title	Comment	Rating	Feedback_Type	Key_Point
1	Amz US		1 I regret buying this Jabra Steel (even with huge d	I purchased this Jabra Steel after I ruined my Motorola Whisper trying to quickly rinse off some	3	0	Sound Quality Rx
2	Amz US		1 Very poor quality - failed in 30 days	I ordered this on 15 May & started using it immediately. It worked great when I first got it. On the	1	0	Sound Quality Rx
3	Amz US		1 Disappointed	No noise cancelling; did not recognize any voice commands. Returned for full refund. Surprised at	1	0	Sound Quality Rx
4	Amz US		1 Jabra Steels the Show	Bought locally for same price. I have not experience some of the issues others have with this unit I	5	0	Sound Quality Rx
5	Amz US		1 Edit: Volume is too low in noisy environments. DO	Edit: I finally had an opportunity to use this in a high noise environment and it is WORTHLESS!! fin	1	0	Sound Quality Rx
6	Amz US		1 Doesnt live up to performance claims	I have had this product for just over a month and the battery wont stay charged. The volume level	1	0	Sound Quality Rx
7	Amz US		1 held up nicely. I called customer care and they ha	I am impressed with the noise reduction and the rugged build and I would have given at least 3 st	2	1	Sound Quality Rx
8	Amz US		1 Simply Awesome	Week One product review Ive got to say Ive heard some pretty bad stuff about this one but the	5	1	Sound Quality Rx
9	Amz US		1 Simply Awesome	Week One product review Ive got to say Ive heard some pretty bad stuff about this one but the	5	0	Sound Quality Rx
10	Amz US		1 Clarity for people on the other end is excellent	For starters the steel is my first bluetooth. So take that how you will. I bought the steel becaus	4	1	Sound Quality Rx
11	Amz US		1 The size and the fit is perfect. It does take some	The size and the fit is perfect. It does take some time trying to figure out how to adjust the ear pie	4	0	Sound Quality Rx
12	Amz US		1 Everything except call waiting	The connectivity was easy. Sound quality is above average. Noise reduction wasn't as advertised b	3	1	Sound Quality Rx
13	Amz US		1 Dont Let 5 Year warranty fool you...	It may have 5 year warranty but I have a deep voice and that makes people on the other side of th	2	0	Sound Quality Rx
14	Amz US		1 Well Constructed but Lacks the Volume Needed for	The Jabra Steel Ruggedized Bluetooth Headset does have a more rugged build than most head:	3	0	Sound Quality Rx
15	Amz US		1 One Star	Speaker volume is tooooooo loww	1	0	Sound Quality Rx
16	Amz US		1 comfortable design but not my first choice for a h	The Jabra Steel Bluetooth headset. For purposes of this review I used this headset with my iPh	3	1	Sound Quality Rx
17	Amz US		1 A very light but rugged headset at last...	As a good rugged bluetooth headset yes this is great. There is excellent noise cancellation/si	4	1	Sound Quality Rx
18	Amz US		1 I have to say Im pretty impressed with this Jabra	I have to say Im pretty impressed with this Jabra headset. Traditionally I have not had good su	5	0	Sound Quality Rx
19	Amz US		1 A Blue-Tooth Ear piece that requires a smart phone	This ear piece uses three microphones to provide a relatively background noise free communic	4	0	Sound Quality Rx
20	Amz US		1 Good sound quality - poor button functionality	Prior to trying the Jabra Steel Ive been a user of the Jabra STEALTH which I have been very plea	3	1	Sound Quality Rx
21	Amz US		1 Needs some improvements	This is initially a very impressive earpiece. My first impression was naturally the setup proc	2	0	Sound Quality Rx
22	Amz US		1 Good Product	Connectivity is really good ranges about 20 meters with great sound quality. Connects to my phon	5	1	Sound Quality Rx
23	Amz US		1 Really close!!	I have used Bluetooth headsets since they were first introduced. I work out doors as a marine	4	1	Sound Quality Rx
24	Amz US		1 The call quality is great. The music audio quality	The call quality is great. The music audio quality is better than I thought. Little bit uncomfortab	4	1	Sound Quality Rx
25	Amz US		1 Firmware Update Greatly improves Volume	Bought this headset for work and was immediately disappointed by the volume of the headset	4	0	Sound Quality Rx
26	Amz US		1 Works as intended	This isnt the most sleek executive looking headset but it works and its very light and comfortab	5	0	Sound Quality Rx
27	Amz US		1 Sound quality good but volume nearly inaudible re	Sound quality good but volume nearly inaudible regardless of phone or laptop settings; less co	4	1	Sound Quality Rx
28	Amz US		1 Sound quality good but volume nearly inaudible re	Sound quality good but volume nearly inaudible regardless of phone or laptop settings; less co	4	0	Sound Quality Rx
29	Amz US		1 Some great features but fails as a functional head	Purchased this from Best Buy and ended up returning after 3 days of use. It connects easily to	1	0	Sound Quality Rx
30	Amz US		1 This is just about the best	I'll be the first to admit that Im not a trade worker but there are some wonderful features abou	5	1	Sound Quality Rx
31	Amz US		1 Dont buy if you like to be able to hear your calls	Tough and easy to use. However terrible terrible volume. Supposedly has automatic volume but v	1	0	Sound Quality Rx
32	Amz US		1 Fantastic!!!	How have I lived without this? Ive had multiple Jabra headsets and all have been great but this is	5	0	Sound Quality Rx
33	Amz US		1 Rugged and Robust.	I have often said that the Plantronics Voyager was the greatest headset Ive ever owned. That	4	0	Sound Quality Rx
34	Amz US		1 Good sound quality. Sturdy. Ugly. Has a nascent lo	Pros: Sturdy Comfortable Very good sound quality "Find the earpiece" feature Cc	4	1	Sound Quality Rx
35	Amz US		1 Incoming sound is great bit outgoing?	I break ear pieces when they fall out of my ear and hit just right. So when this Jabra Steel head	4	1	Sound Quality Rx
36	Amz US		1 Good headset.	This is a item marketed by Jabra as a rugged bluetooth headset. First off Jabra is a good brai	4	1	Sound Quality Rx

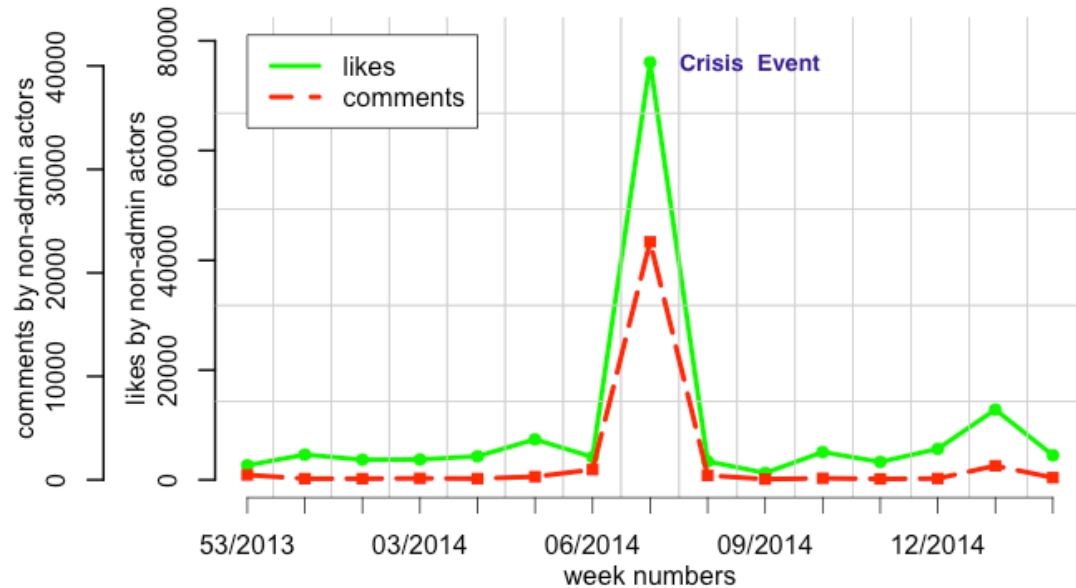
# The Online Review Analytics Solution Suite (TORAS)



# Crisis Management

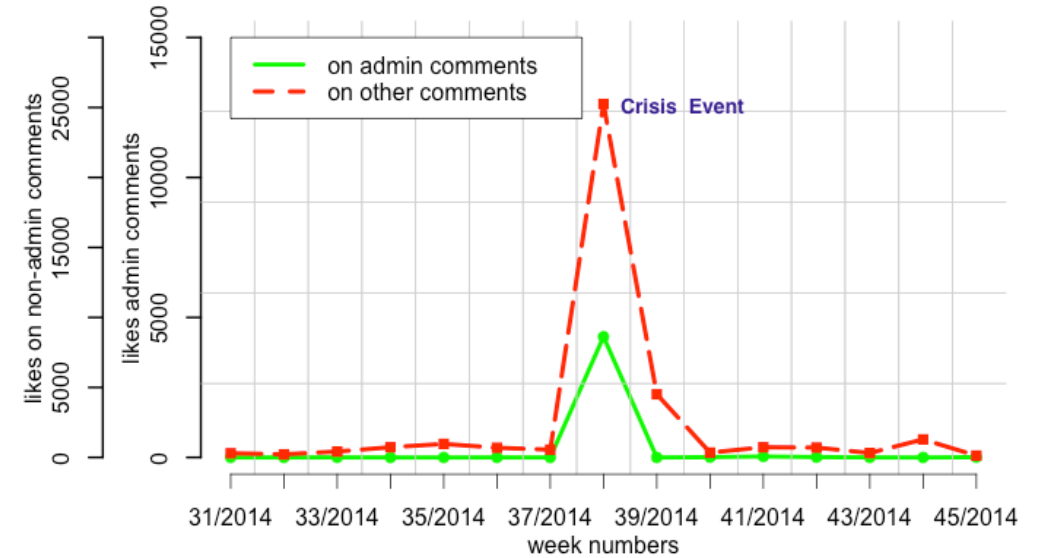
# Artefact and Action Analytics

Temporal Analysis of actors who interacted during crisis: Interactional spikes found in both cases



Likes on admin's posts and comments far greater than likes on non-admin comments

indicates **positive endorsement** of Zoo's activities during the crisis



Likes on admin posts and comments far less than likes on non-admin comments

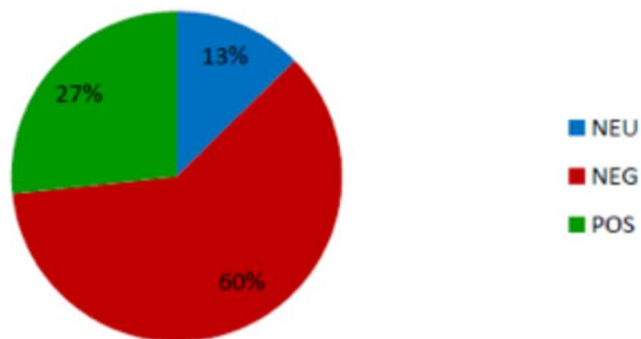
indicates **negative endorsement** of Jensen's Bøfhus' activities during the crisis

- **Quick & Dirty Method** for post hoc Crisis Detection & Characterization
- Facebook Reactions: **Fast & Frugal Algorithms** for real-time Event Detection

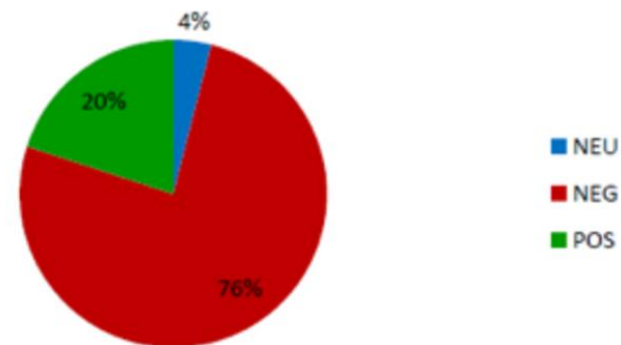
# Content Analysis



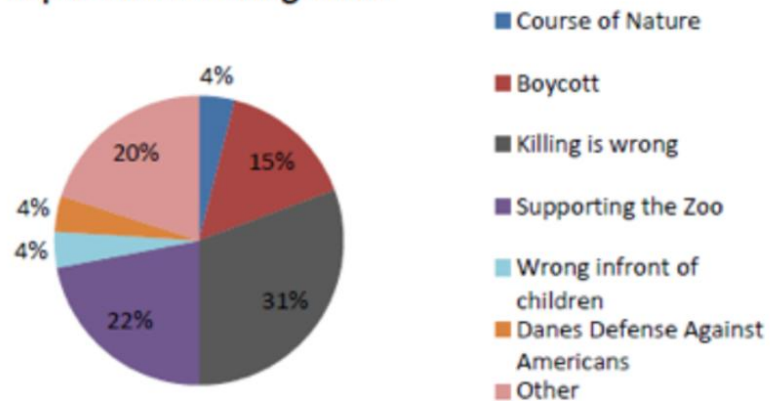
Sentiments: Zoo: During Crisis



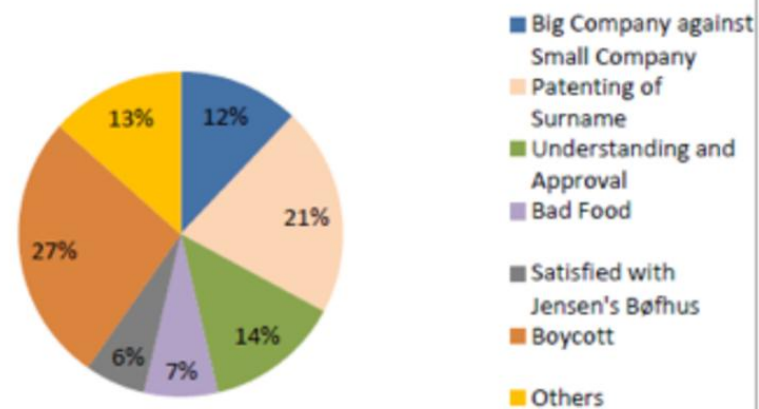
Sentiments: Jensen's Bøfhus: During Crisis



Topics: Zoo: During Crisis



Topics: Jensen's Bøfhus: During Crisis



# Business Impact: Social Media Crisis of CPH Zoo: **NONE**

**Artefacts:** All Data: Wall beginning to last collected timestamp

**Actors:** All Facebook users on Copenhagen Zoo Page

**Actions:** LIKE on Admin's Posts and Comments

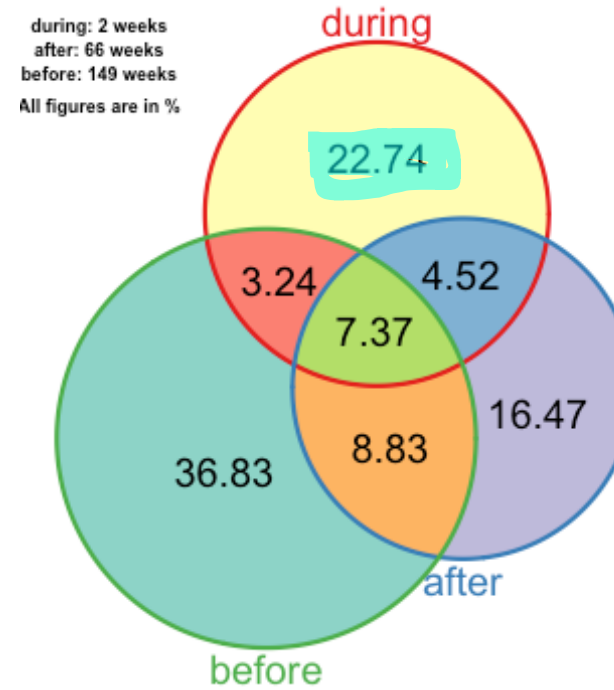
**Activity:** Positive Association to Admin's Posts or Comments

Sociological Importance  
Organizational Relevance

## Interpretation: Computational Social Science: Set Theory

LIKEs were a way of expressing cultural solidarity and in-group support to a Danish institution perceived to be under undeserved out-group criticism

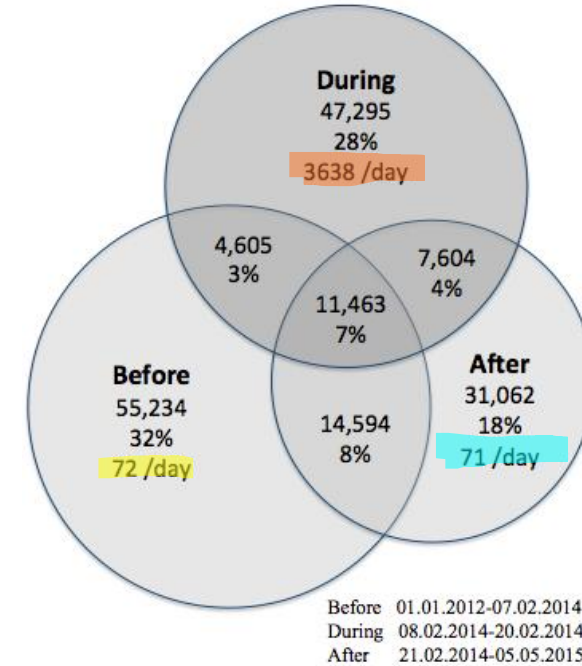
- NO increase in sales (tickets or annual passes)
- Weather and Website Visits account for most variance in total visitors to the Zoo
- **Creepy Idea:** Birth Count in the Greater Copenhagen Area might account for the rest



Actors Likes on Zoo's Posts & Comments



During Crisis :08-20 February, 2014



Unique Actors on Zoo's FB Wall

# Similar Response Strategy but Different Results



Denmark vs. Non-Denmark

<b>Deny</b>	Attack accuser	Denial	Scapegoat
<b>Diminish</b>	Excuse	<b>Justification</b>	-
<b>Rebuild</b>	Compensation	Apology	-
<b>Reinforce</b>	Bolstering	Ingratiation	Victimize



Within Denmark



<http://pelk.dk/infgrfx/index.php?img=State-sponsored-killings-in-2014.jpg>

# Ratings Management

# Online Public Sphere: Norway: Winter Olympics: NRK → TV2

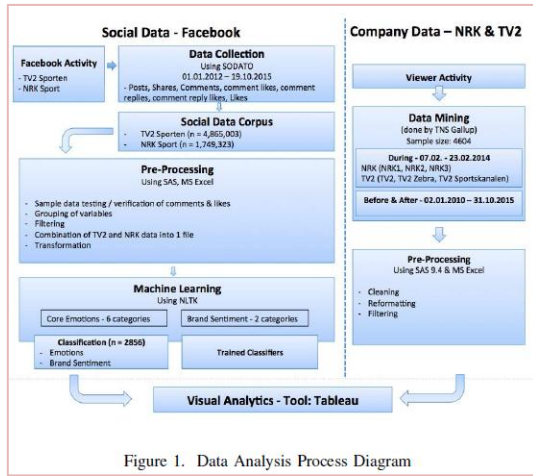


Figure 1. Data Analysis Process Diagram

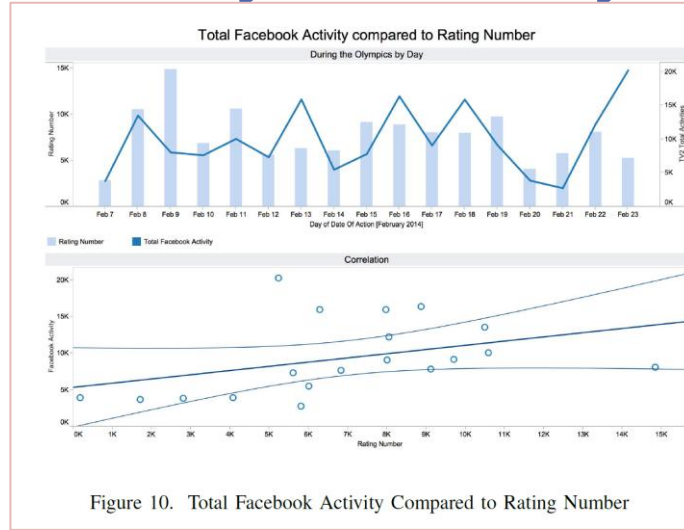


Figure 10. Total Facebook Activity Compared to Rating Number

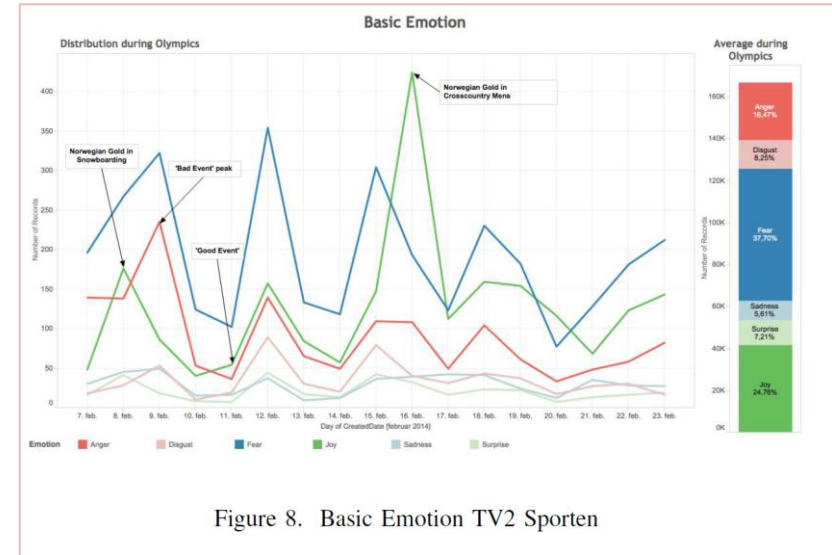


Figure 8. Basic Emotion TV2 Sporten

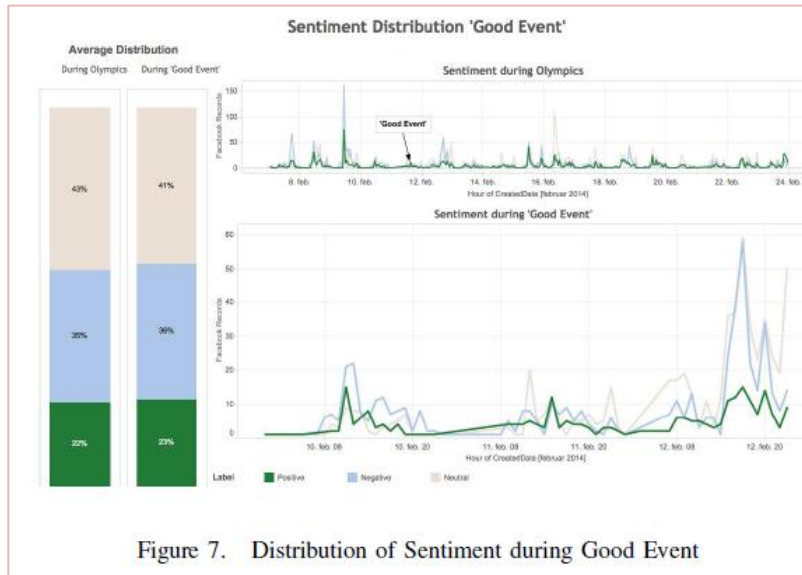


Figure 7. Distribution of Sentiment during Good Event

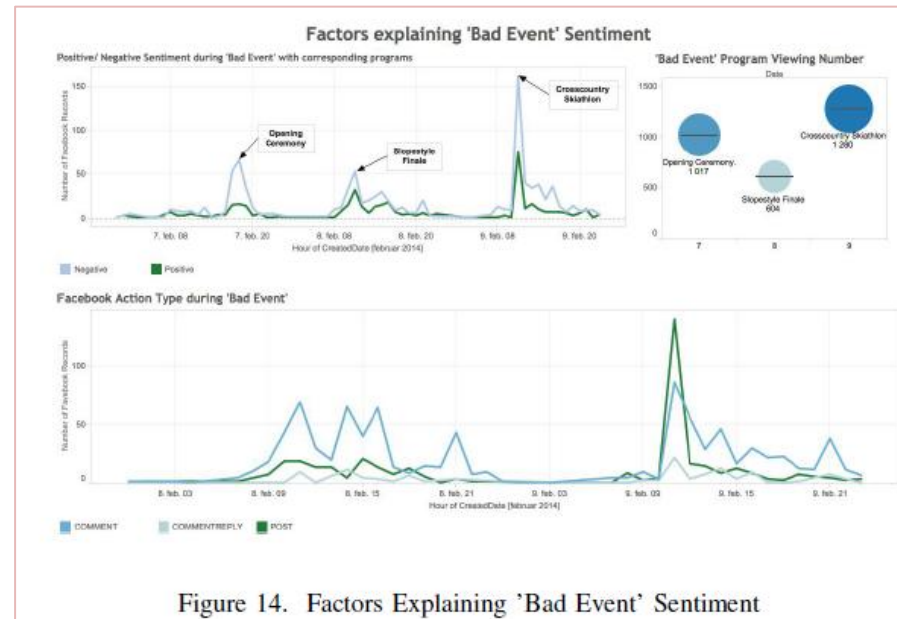


Figure 14. Factors Explaining 'Bad Event' Sentiment

# Online Public Sphere: Norway & Sweden: TV Show: Skavlan

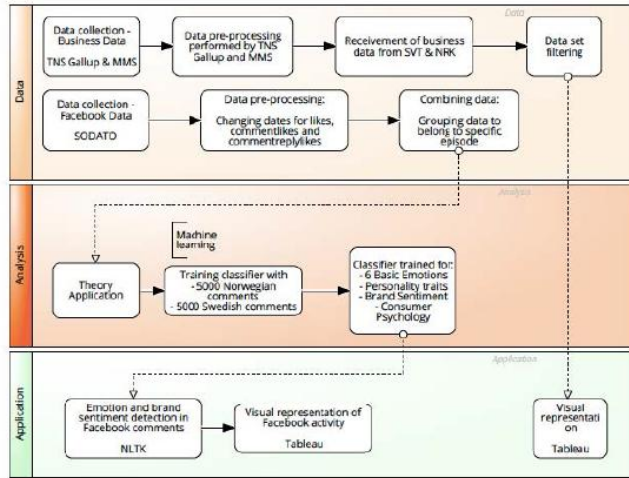


Figure 1. Data Analysis Process Diagram

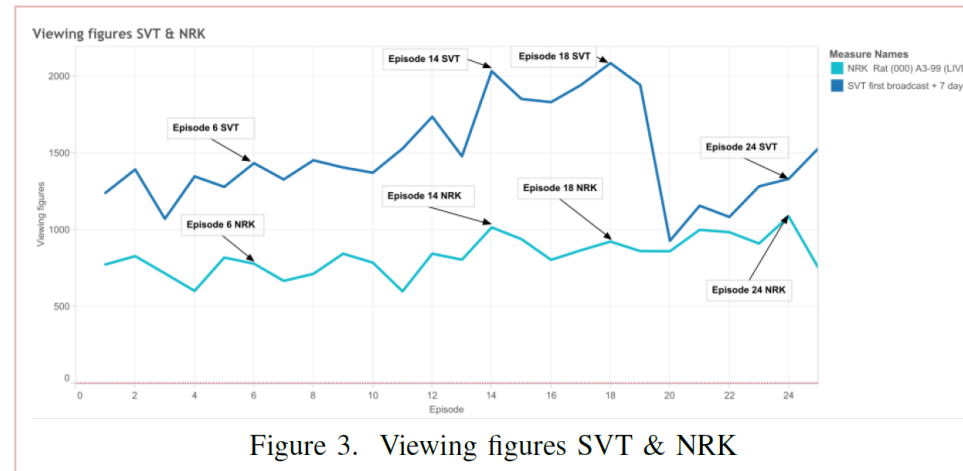


Figure 3. Viewing figures SVT & NRK

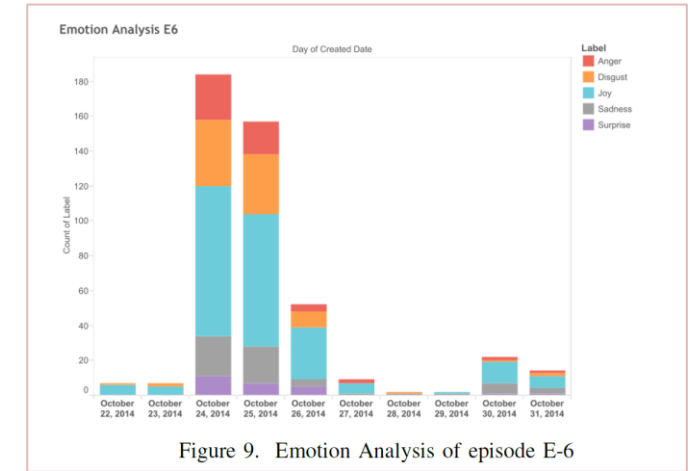


Figure 9. Emotion Analysis of episode E-6

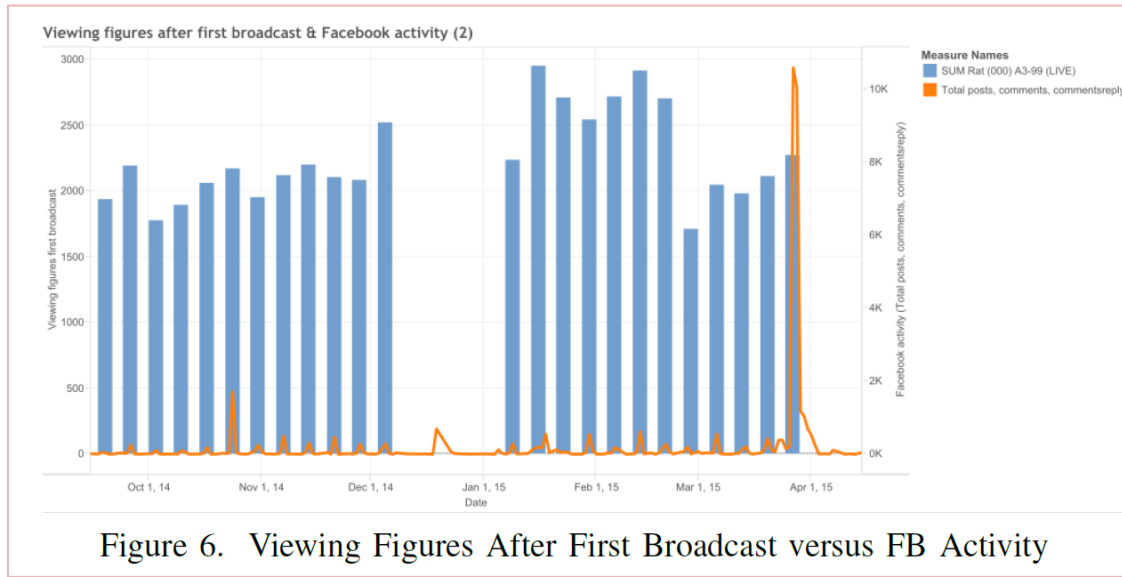


Figure 6. Viewing Figures After First Broadcast versus FB Activity

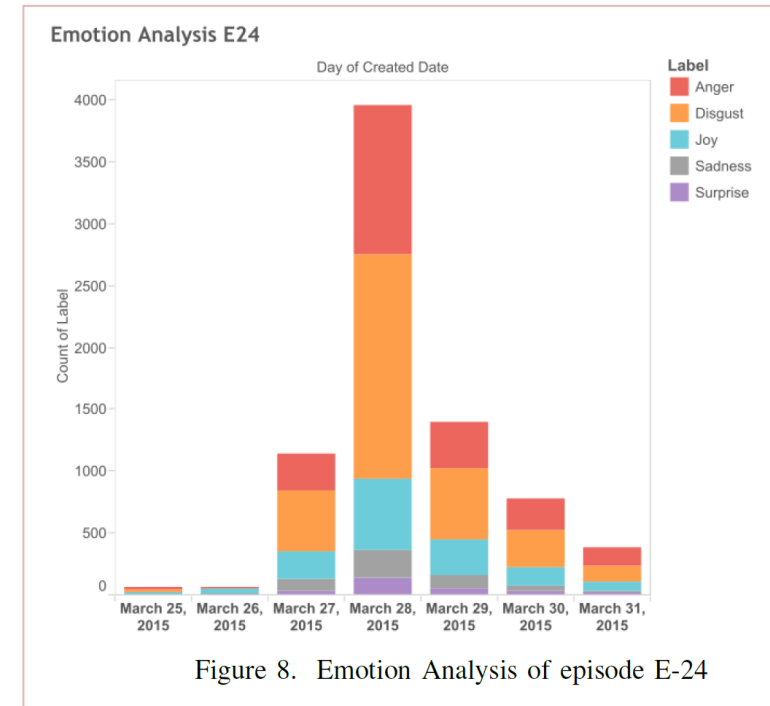


Figure 8. Emotion Analysis of episode E-24

# Customer Relationship Management

# Loyalty Club Programs

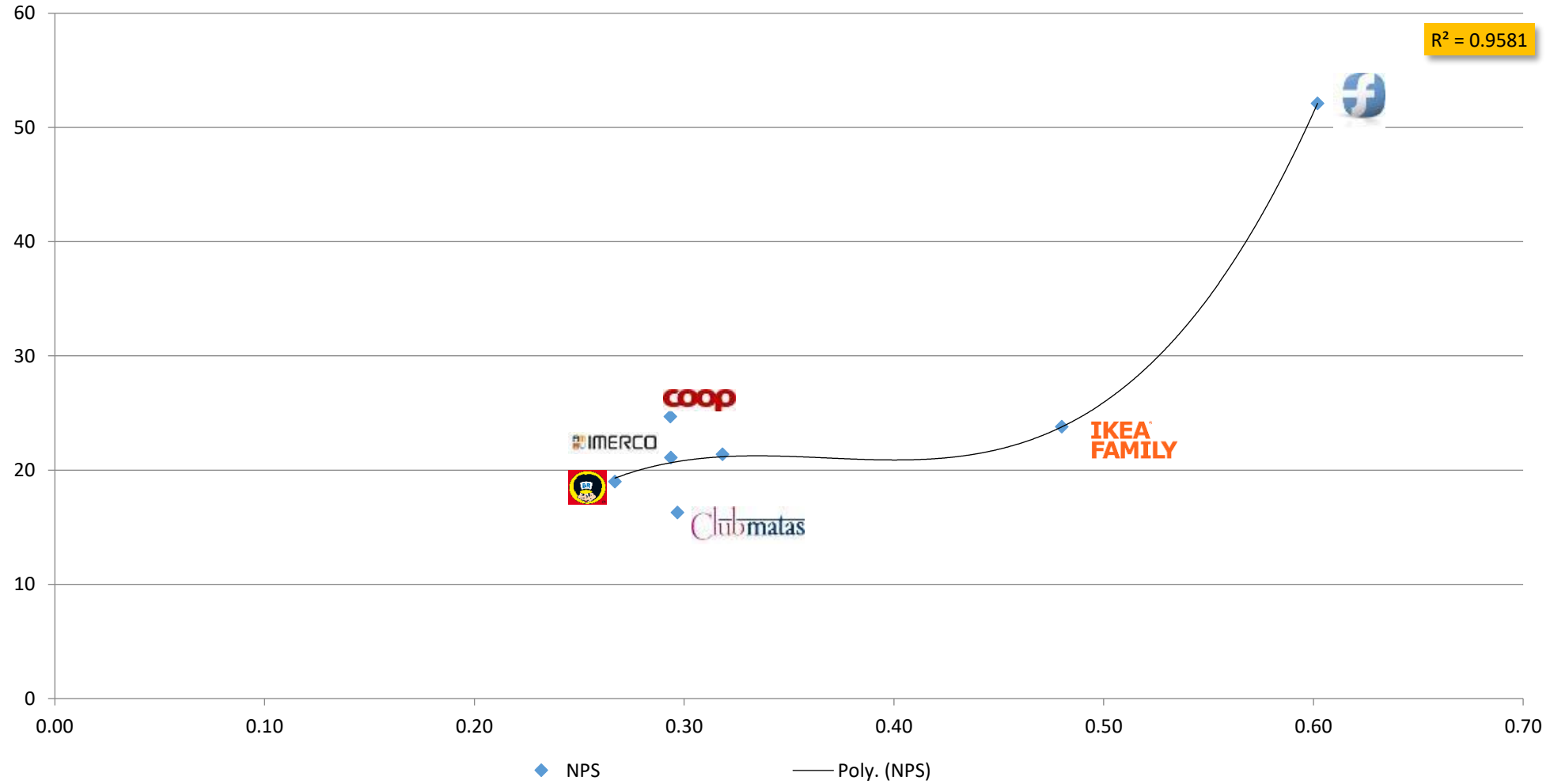
- Datasets
  - CRM
- Interviews
- Facebook



CBS COPENHAGEN BUSINESS SCHOOL  
HANDELSHØJSKOLEN



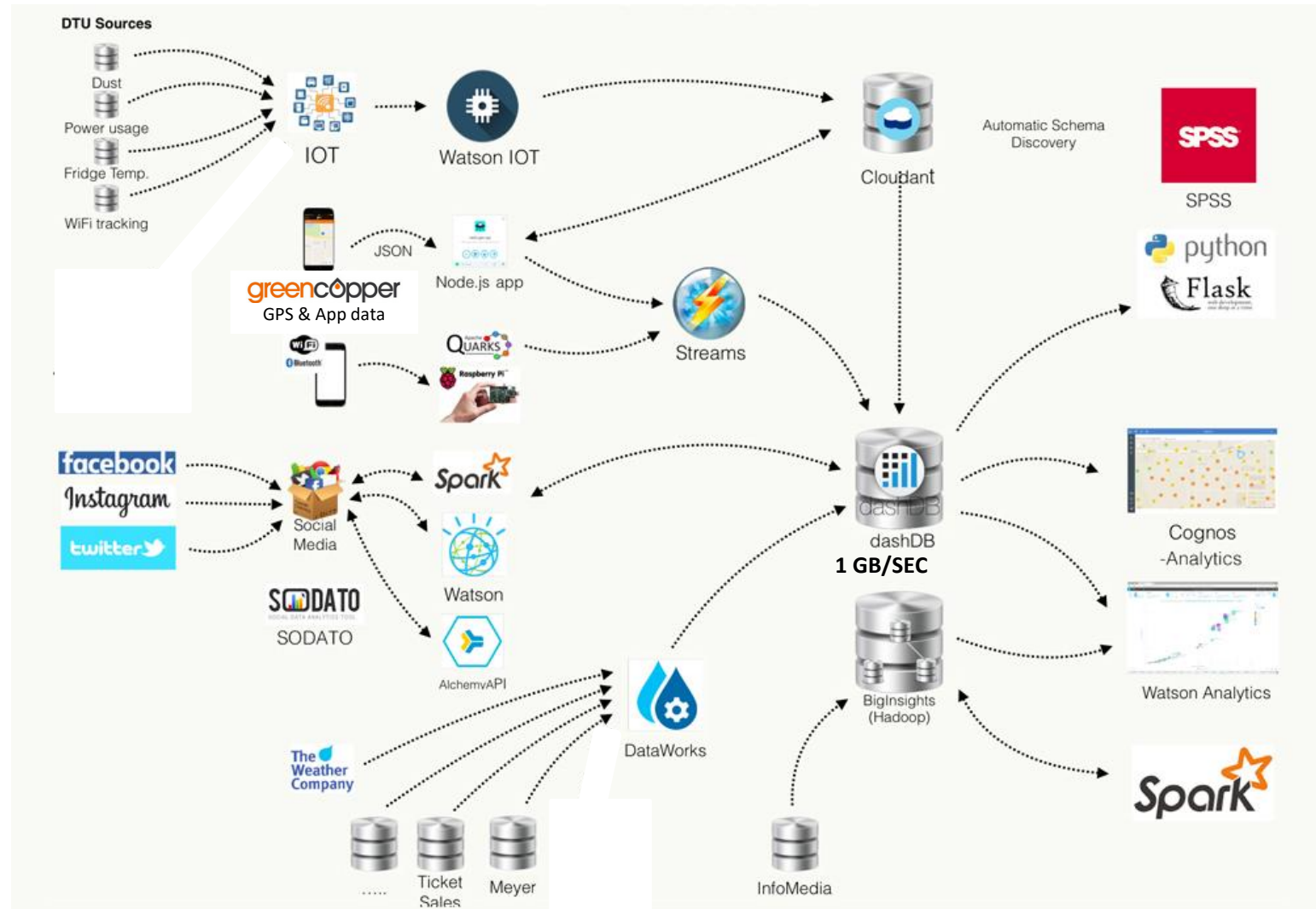
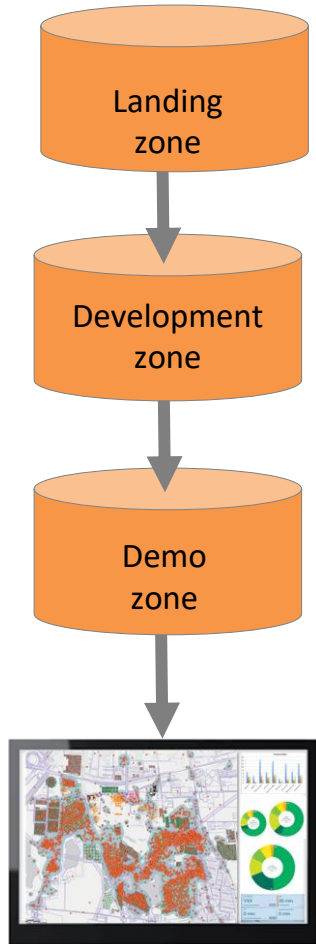
# Predicting Net Promotor Score From Big Social Data







# Roskilde Festival 2017 with IBM



# Roskilde Festival 2017: cbsBDA

Social Media Inventory of RF17



Name	Type	Country	Link	Facebook	Twitter ID	Hashtag	Fetched Solution	Follower
1 Roskilde	Festival	Denmark	https://www.facebook.com/rozkilde17/	1024801730	@orangepeeling	#RoskildeFest	10/10/2017	1024801730
2 Glaxomy	Festival	US	https://www.facebook.com/glaxomy/	402133983	@GlaxomyFest	#GlaxomyFest	10/10/2017	402133983
3 Dour	Festival	Denmark	https://www.facebook.com/dourfestival/	431908655	@dourfestival	#DourFest	10/10/2017	431908655
4 Way Out West	Festival	Denmark	https://www.facebook.com/wayoutwest/	2285113826	@wayoutwest	#WayOutWest	10/10/2017	2285113826
5 Trossel Festival	Festival	Denmark	https://www.facebook.com/trosselfestival/	13388081101	@trosselfest	#TrosselFest	10/10/2017	13388081101
6 Spøgen Festival	Festival	Denmark	https://www.facebook.com/spoegen/	928052817	@spoegen	#SpøgenFest	10/10/2017	928052817
7 Copenhagen	Festival	Denmark	https://www.facebook.com/copenhagenfestival/	235681815	@copenhagenfest	#CopenhagenFest	10/10/2017	235681815
8 Snek Festival (Skanderborg Festival)	Festival	Denmark	https://www.facebook.com/sneksfestival/	2144713522	@snekfest	#SnekFest	10/10/2017	2144713522
9 Sone	Festival	Denmark	https://www.facebook.com/sonesfestival/	186292544	@sonesfest	#SoneFest	10/10/2017	186292544
10 Trokassen	Festival	Denmark	https://www.facebook.com/trokassen/	48110112058	@trokassen	#Trokassen	10/10/2017	48110112058
11 Rock on Sine	Festival	Denmark	https://www.facebook.com/rockonsine/	157181335	@rockonsine	#RockOnSine	10/10/2017	157181335
12 Babes	Festival	Denmark	https://www.facebook.com/babesfestival/	167200732	@babesfest	#BabesFest	10/10/2017	167200732
13 Burning Man	Festival	Denmark	https://www.facebook.com/burningman/	486364342	@burningman	#BurningMan	10/10/2017	486364342
14 INDI	Festival	Denmark	https://www.facebook.com/indi/	78393393	@indi	#IndiFest	10/10/2017	78393393
15 Quarter	Festival	Denmark	https://www.facebook.com/quarter/	72324887	@quarter	#QuarterFest	10/10/2017	72324887
16 Weecher	Festival	Denmark	https://www.facebook.com/weecher/	10407926671	@weecher	#WeecherFest	10/10/2017	10407926671
17 Rock at Pargus	Festival	Denmark	https://www.facebook.com/rockatpargus/	817035188	@rockatpargus	#RockAtPargus	10/10/2017	817035188
18 T in the Park	Festival	Denmark	https://www.facebook.com/tinthepark/	87064887	@tinthepark	#TInThePark	10/10/2017	87064887
19 Exit	Festival	Denmark	https://www.facebook.com/exit/	118162967	@exitfest	#ExitFest	10/10/2017	118162967
20 Coachella	Festival	Denmark	https://www.facebook.com/coachella/	2028176647	@coachella	#Coachella	10/10/2017	2028176647
21 Reading Festival	Festival	Denmark	https://www.facebook.com/readingfestival/	2178712122	@readingfest	#ReadingFest	10/10/2017	2178712122
22 Sirge	Festival	Denmark	https://www.facebook.com/sirge/	1146222914	@sirgeofficial	#SirgeFest	10/10/2017	1146222914
23 Pargus	Festival	Denmark	https://www.facebook.com/pargus/	16370846208	@pargusfest	#PargusFest	10/10/2017	16370846208
24 Rock Festival	Festival	Denmark	https://www.facebook.com/rockfestival/	814181708	@rockfest	#RockFest	10/10/2017	814181708
25 Northside	Festival	Denmark	https://www.facebook.com/northside/	1074102813121	@northsidefest	#NorthsideFest	10/10/2017	1074102813121
26 Reading Festival	Festival	Denmark	https://www.facebook.com/readingfestival/	3718712122	@readingfest	#ReadingFest	10/10/2017	3718712122
27 Rock on Ring	Festival	Denmark	https://www.facebook.com/rockonring/	130241819	@rockonring	#RockOnRing	10/10/2017	130241819
28 Summerjam	Festival	Denmark	https://www.facebook.com/summerjam/	484485178	@summerjam	#SummerJam	10/10/2017	484485178
29 Baltic Sea Area Fest	Festival	Denmark	https://www.facebook.com/balticseafest/	16720146213	@balticseafest	#BalticSeaAreaFest	10/10/2017	16720146213
30 Ultra Music Festival	Festival	Denmark	https://www.facebook.com/ultra/	2767102738	@ultra	#UltraFest	10/10/2017	2767102738
31 Baker Beach TV	Festival	Denmark	https://www.facebook.com/bakerbeachtv/	16481168719	@bakerbeachtv	#BakerBeachTV	10/10/2017	16481168719
32 De Montfort	Festival	Denmark	https://www.facebook.com/demontfort/	16202000000	@demontfort	#DeMontfort	10/10/2017	16202000000
33 Who The Valley Festival	Festival	Denmark	https://www.facebook.com/whoth valley/	1468201185450	@whothvalley	#WhoTheValleyFest	10/10/2017	1468201185450
34 Dimensions Festival	Festival	Denmark	https://www.facebook.com/dimensionsfestival/	158881914187	@dimensions_fest	#DimensionsFest	10/10/2017	158881914187
35 Drenk City	RF	Sustainability	https://www.facebook.com/drenkcity/	1863491180711	@drenkcity	#DrenkCity	10/10/2017	1863491180711
36 Clean Oil Land	RF	Sustainability	https://www.facebook.com/cleanoil/	15749646209	@cleanoil	#CleanOilLand	10/10/2017	15749646209
37 FOOD FIGHTERS US	Band	Denmark	https://www.facebook.com/foodfighters/	202867544	@FOODFIGHTERS_US	#FoodFighters	10/10/2017	202867544
38 ARCADE FIRE CA	Band	Denmark	https://www.facebook.com/arcadefire/	1521278224	@arcadefire	#ArcadeFire	10/10/2017	1521278224
39 THE WEEKND CA	Band	Denmark	https://www.facebook.com/theweeknd/	29238266662	@theweeknd	#TheWeeknd	10/10/2017	29238266662
40 THE BRICKS	Band	Denmark	https://www.facebook.com/thebricks/	102466501	@The_brick	#TheBricks	10/10/2017	102466501
41 ICE CUBE US	Band	Denmark	https://www.facebook.com/icecube/	218732824	@IceCube_US	#IceCube	10/10/2017	218732824
42 JUSTICE US	Band	Denmark	https://www.facebook.com/justice/	288203116	@justice	#Justice	10/10/2017	288203116
43 MODERAT (Cover art featuring MODELEKTOR)	Band	Denmark	https://www.facebook.com/moderat/	537708712	@ModeratOfficial	#Moderat	10/10/2017	537708712
44 BOLLANDS US	Band	Denmark	https://www.facebook.com/bollands/	242299448	@bollands	#Bollands	10/10/2017	242299448
45 THE KIDZ IN THE DR	Band	Denmark	https://www.facebook.com/thekidz/	220200054	@thekidz	#TheKidz	10/10/2017	220200054



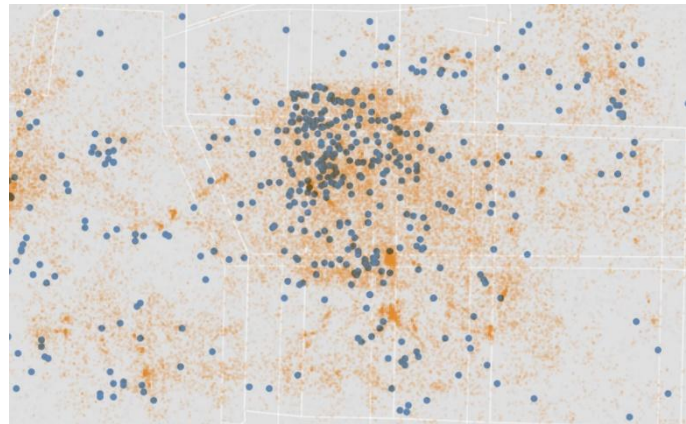
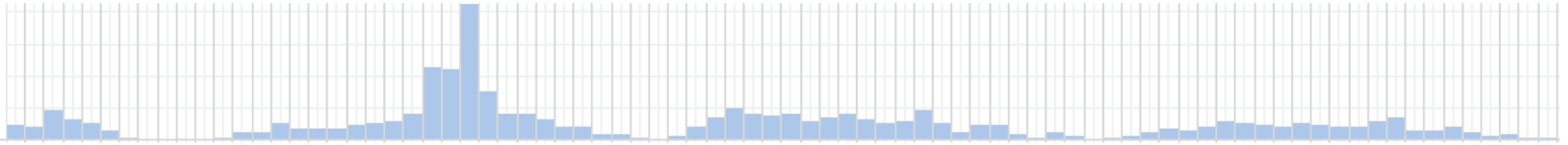
(MUTATO)  
Multi-Dimensional Text Analytics Tool

SOSEVI  
The Social Set Visualizer

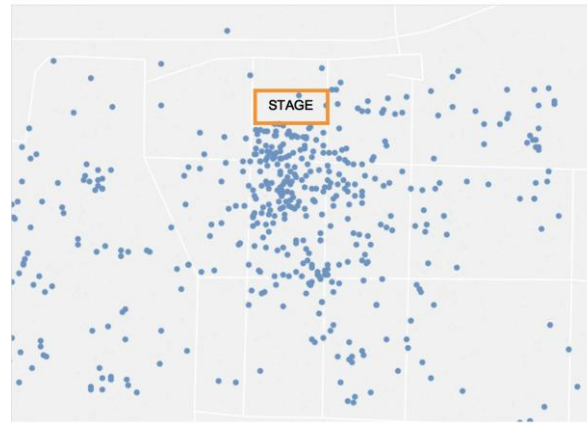


# Geographies of Being, Sharing, and Feeling

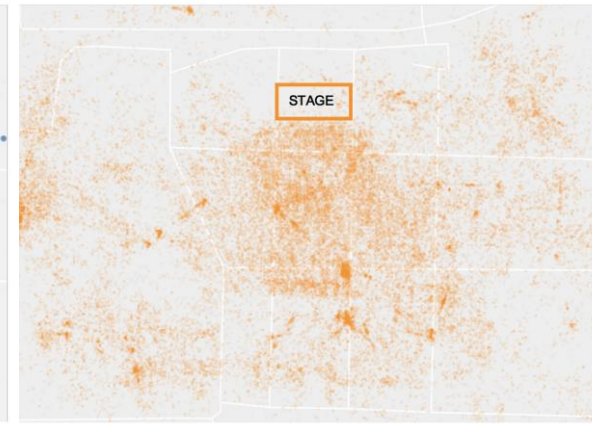
Florence and the Machine



PHOTOS / GEOSOCIAL POSTS



MOBILE PRESENCE



**Feeling:** how people experience RF17 in terms of emotions, feelings and sentiments (happy, sad, amusing etc.)

**Sharing:** what people find important, interesting, and/or relevant to share on social media about RF17

**Being:** where people are present (Orange Stage, Camping etc.)

## Artist Facebook Dashboard



Foo Fighters



Awesome Fighters Glastonbury Please  
**Taylor** Thanks amazing awesome  
better coming concert fighters fucking people  
please really should that's ticket  
tickets

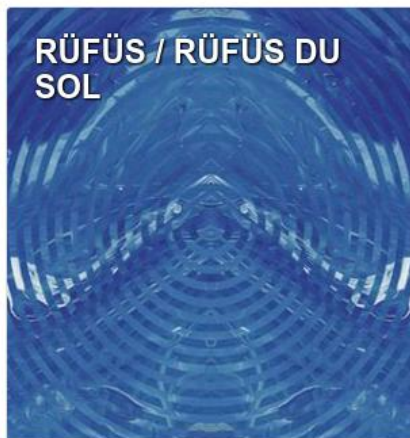


Cashmere Cat

Two hundred channels  
and nothing but cats.



Absolutely Agreed Amazing Ariana  
Awesome Cashmere Thanks  
absolutely already beautiful cashmere  
comment correct features listen please really  
thanks totally wedding



RUFÜS / RUFÜS DU SOL



Friday Please actually amazing another  
awesome better coming excited festival  
**lineup** playing please should  
that's though ticket tickets weekend  
you're



RED FANG



Awesome Brazil Congrats Fighters Fucking  
Hellfest Please Poland Thanks That's amazing  
**awesome** coming deserved favorite  
fucking opening please should videos



Blood Command



Absolutely Amazing Australia  
**Awesome** Karina Really Release  
Sounds Thanks albumet already chorus  
excited forward listen really record  
release sometime spotify



The Rumour Said Fire



Cancer



Romperayo



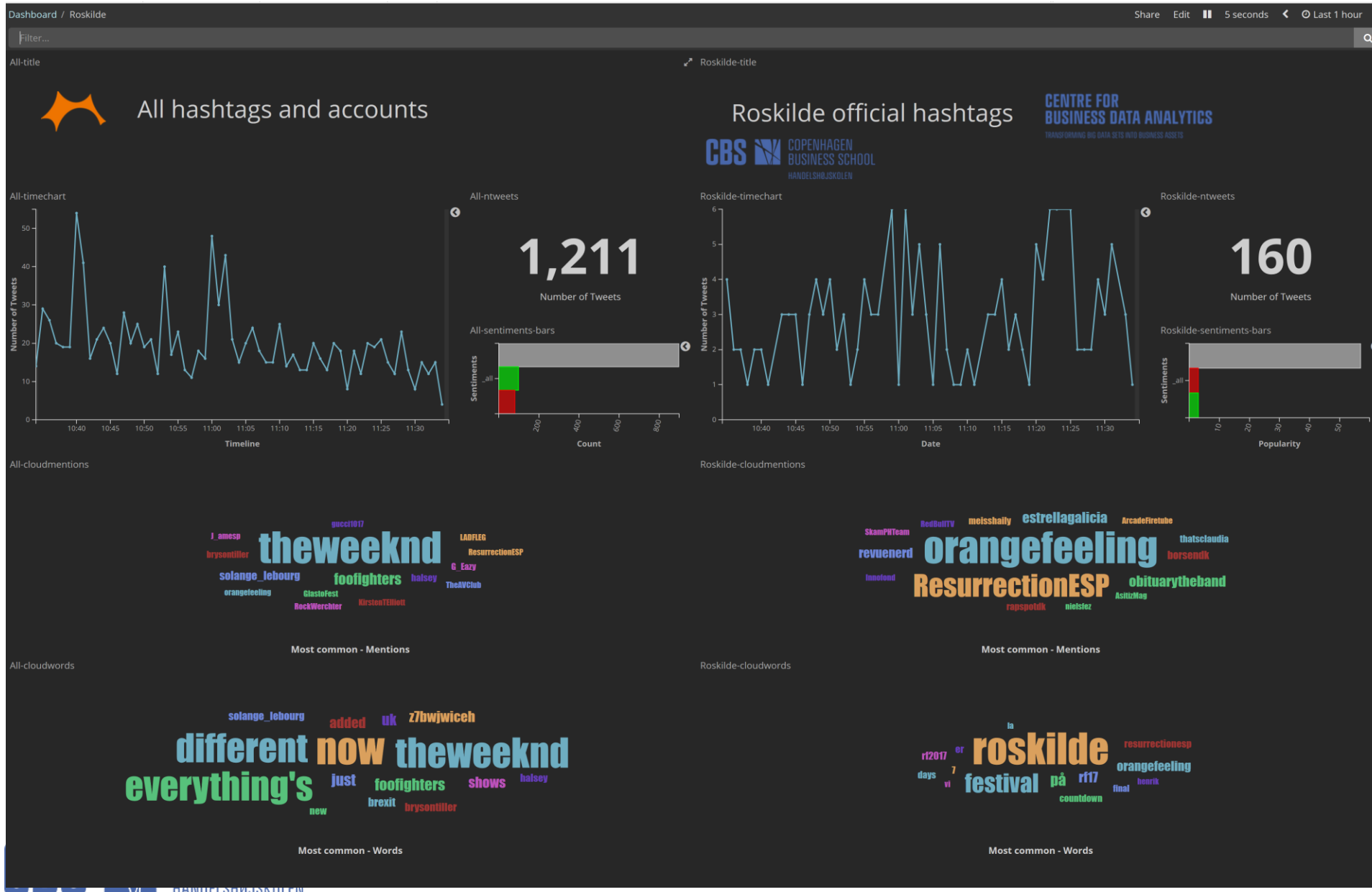
Botany



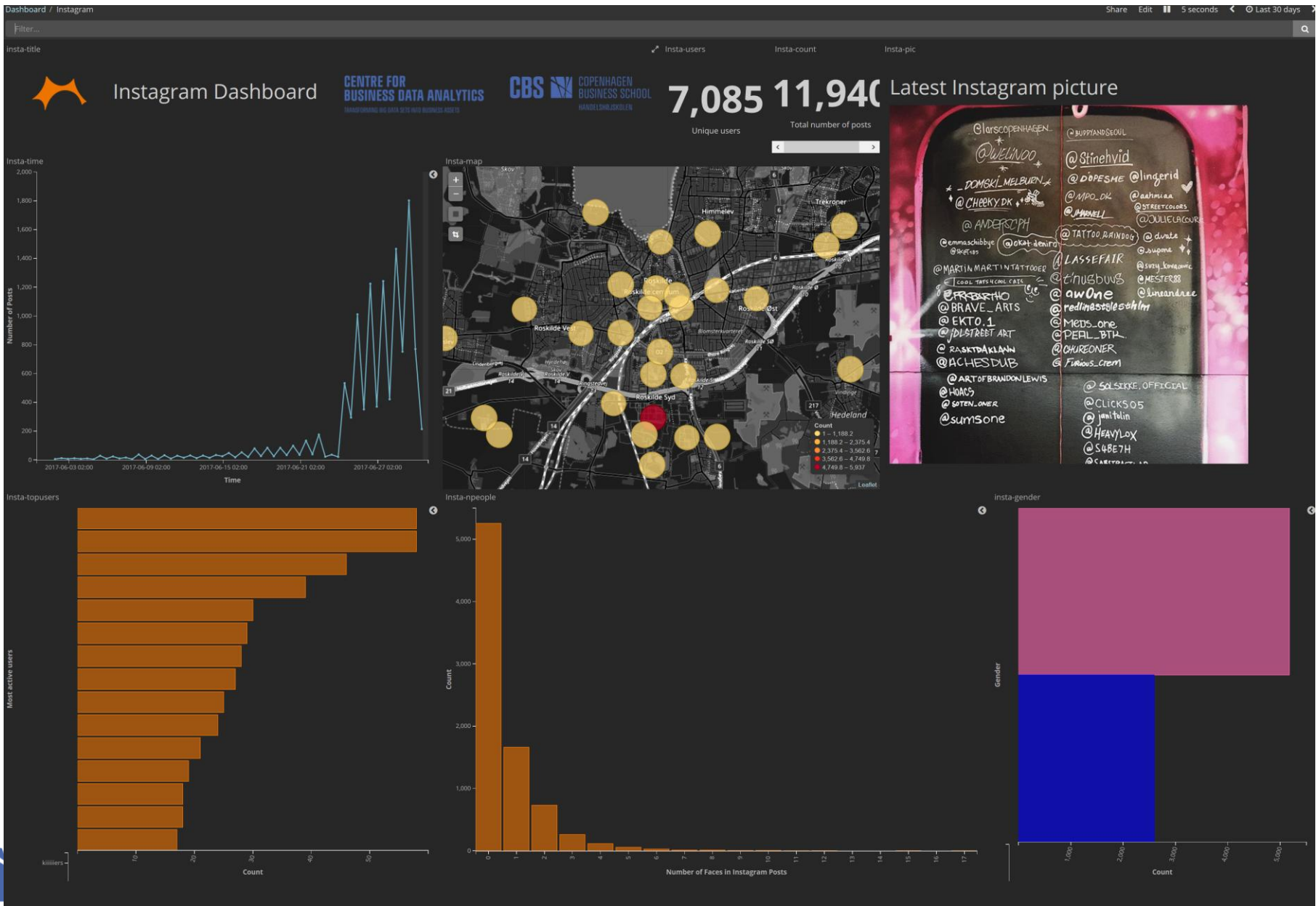
Boujeloud



# Visual Analytics: Dashboards: Twitter

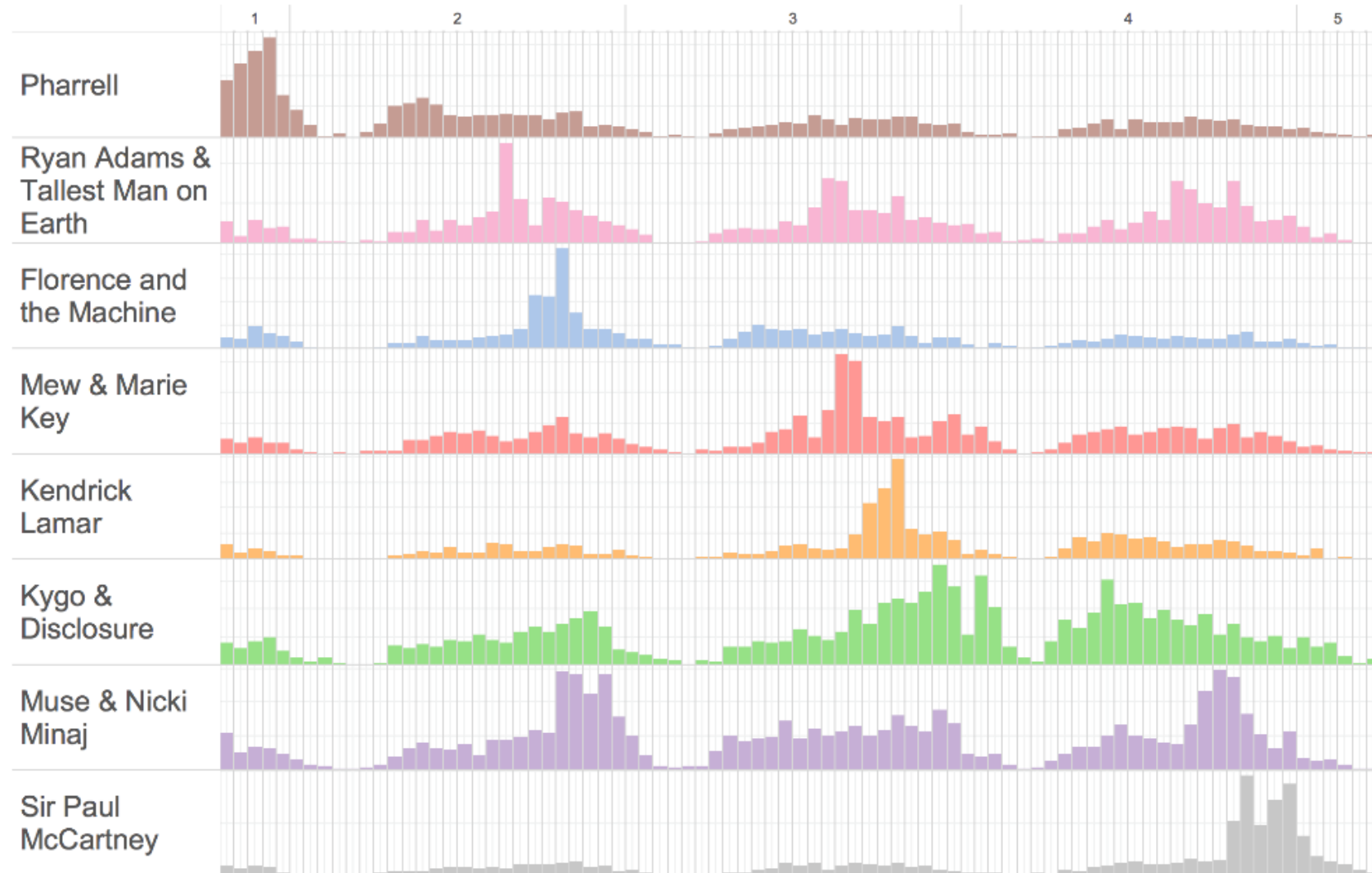


# Visual Analytics: Dashboards: Instagram

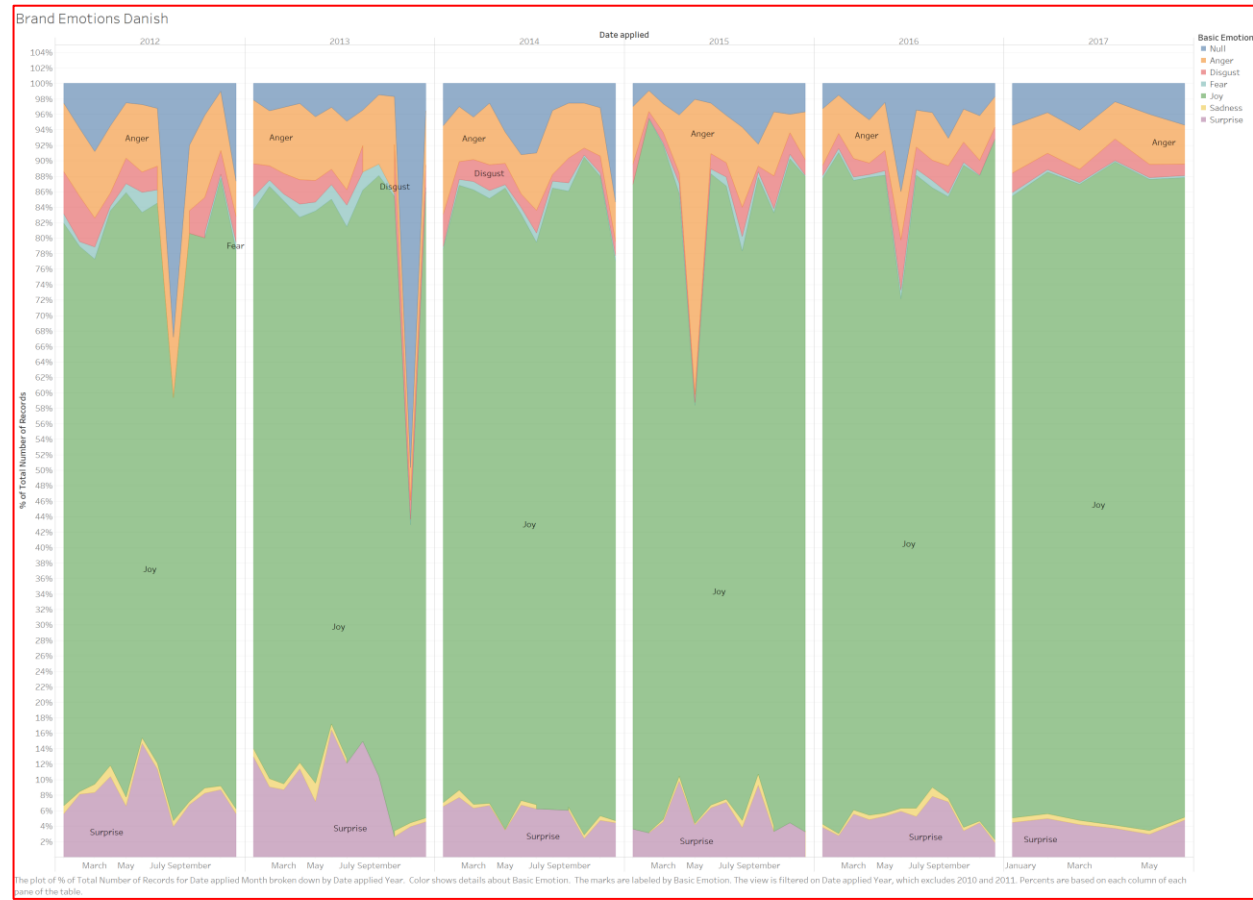
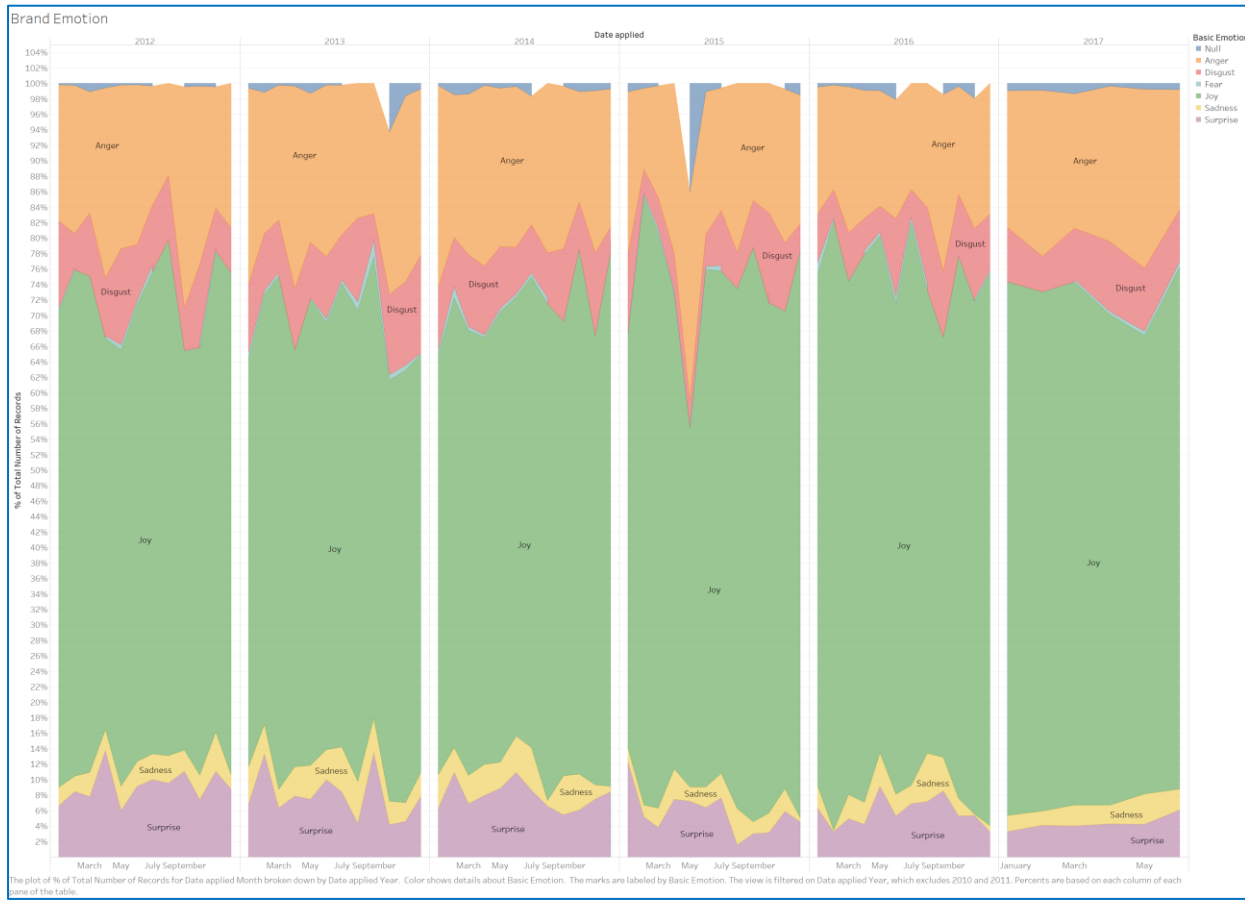


# Flows in Conversation

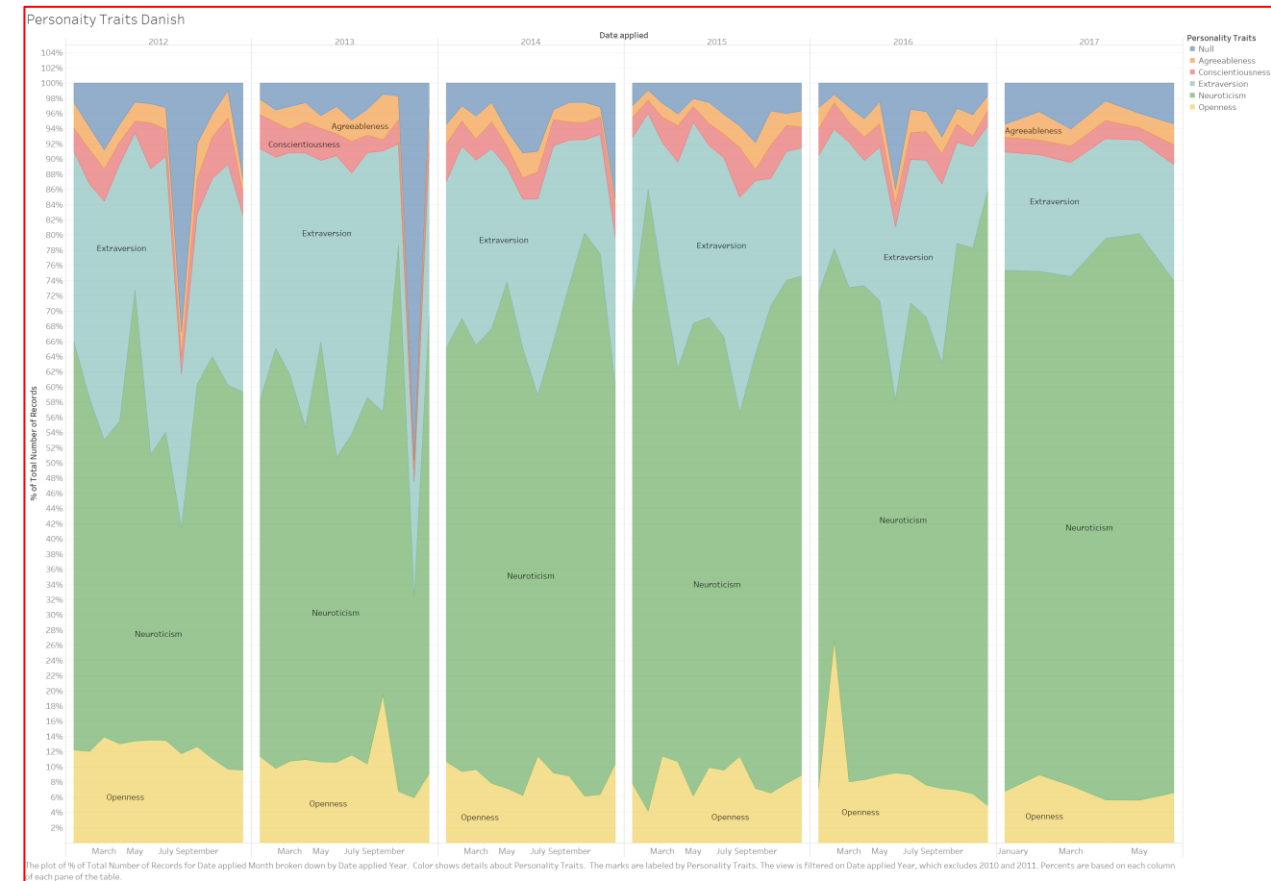
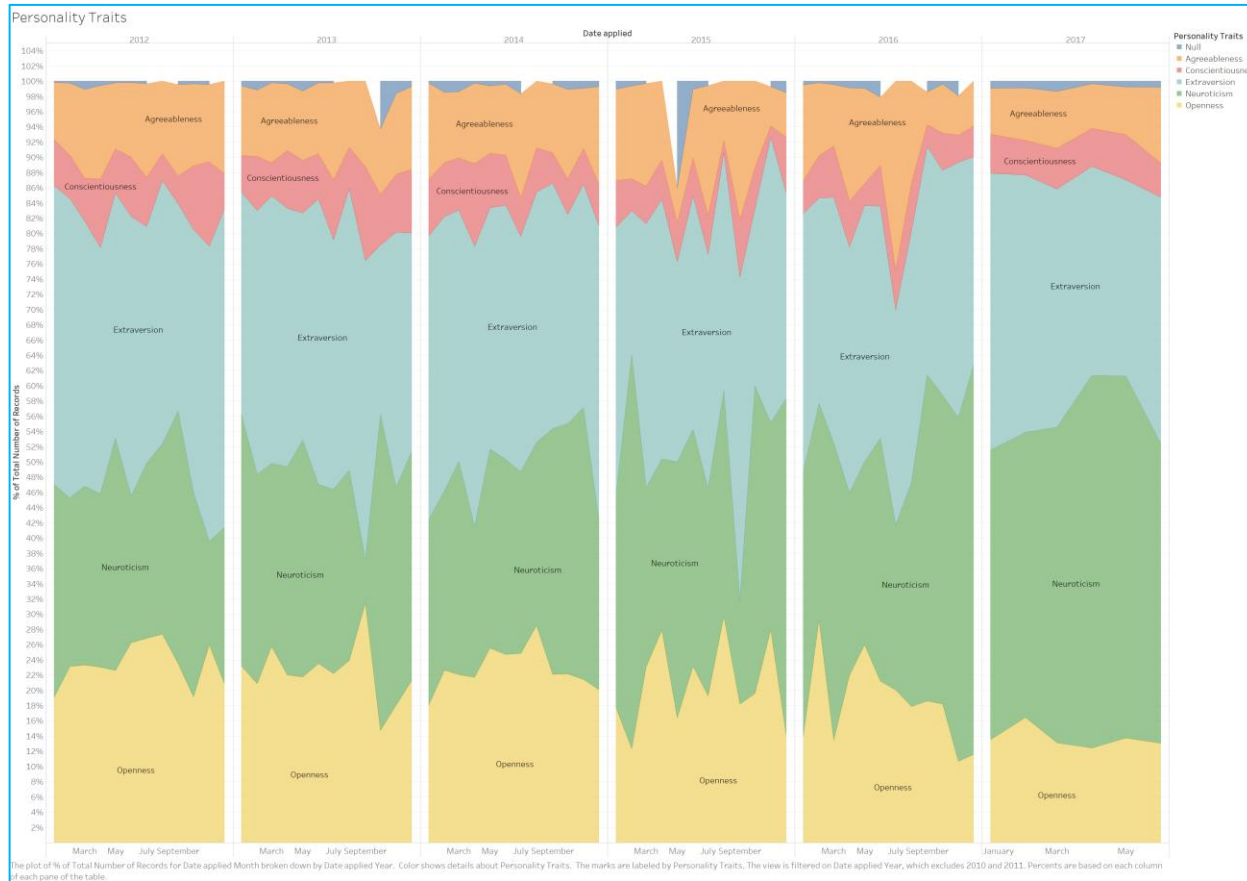
- **Flows across topics** rather than shifting volumes of people/posts across spaces.
- Text mining from online mentions [MineMyText](#) (Müller, et al. 2016)
- Topic modelling (20 topics) generated mostly band-specific topics (Müller et al 2016).



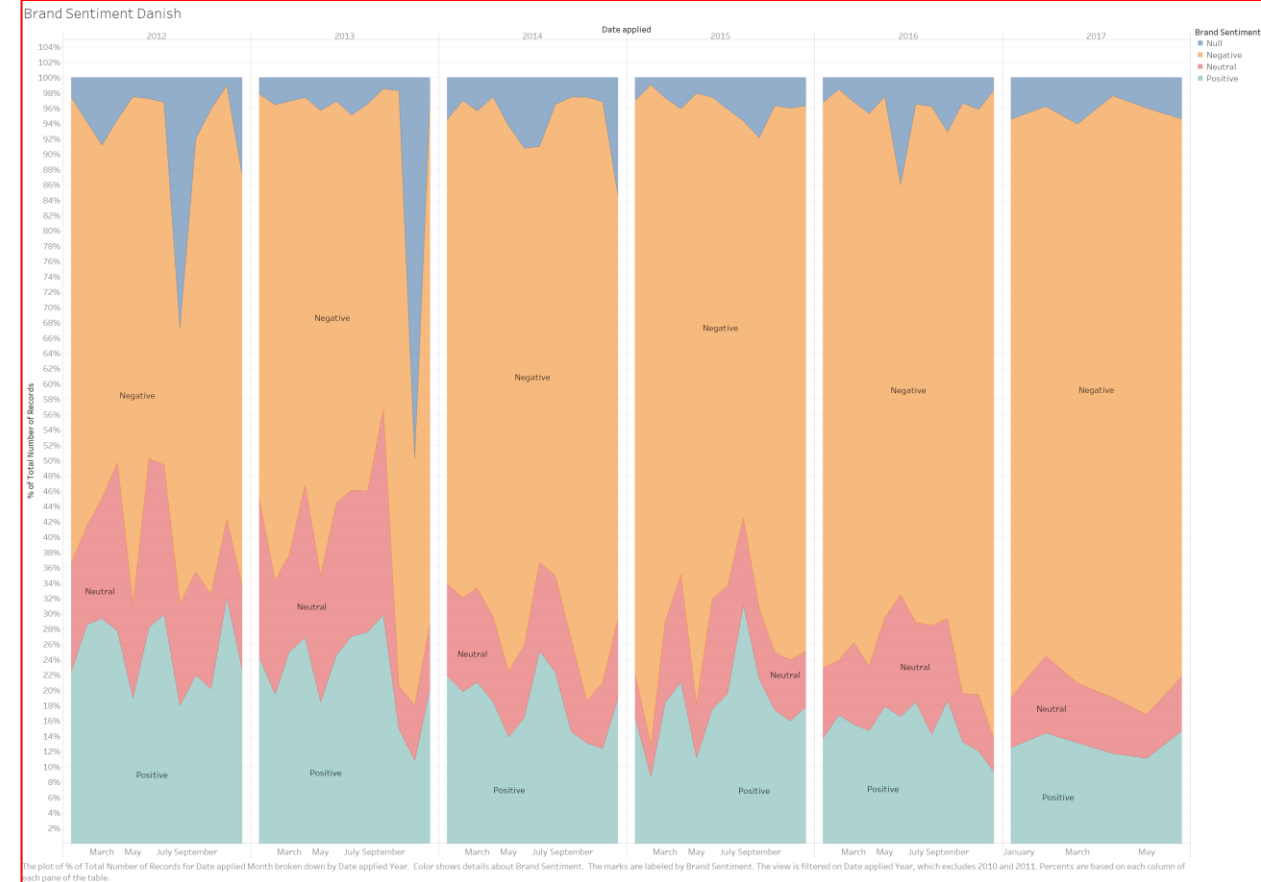
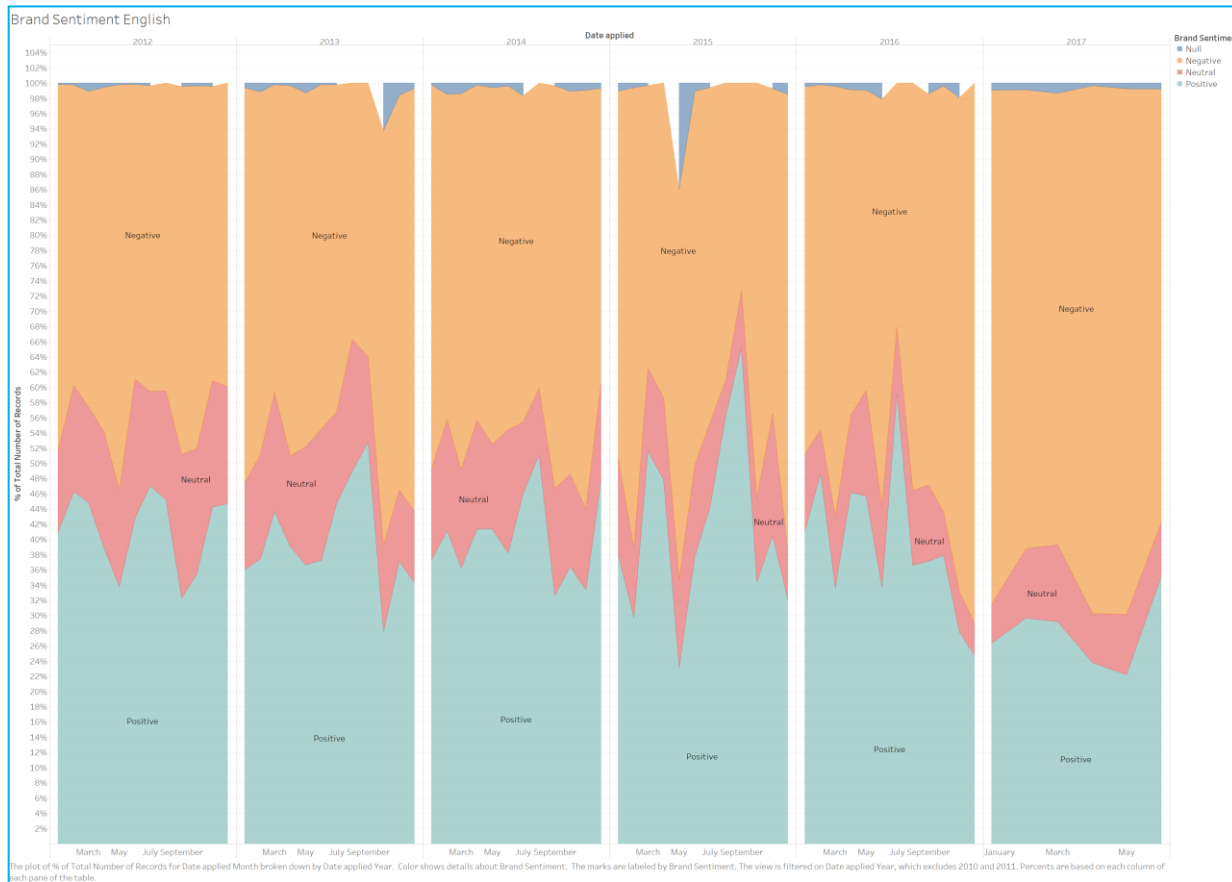
# Text Analytics: Facebook: Roskilde Festival (2012-2017): Six Basic Emotions: English vs. Danish



# Text Analytics: Facebook: Roskilde Festival (2012-2017): Personality Types: English vs. Danish



# Text Analytics: Facebook: Roskilde Festival (2012-2017): Brand Sentiment: English vs. Danish



# Discussion