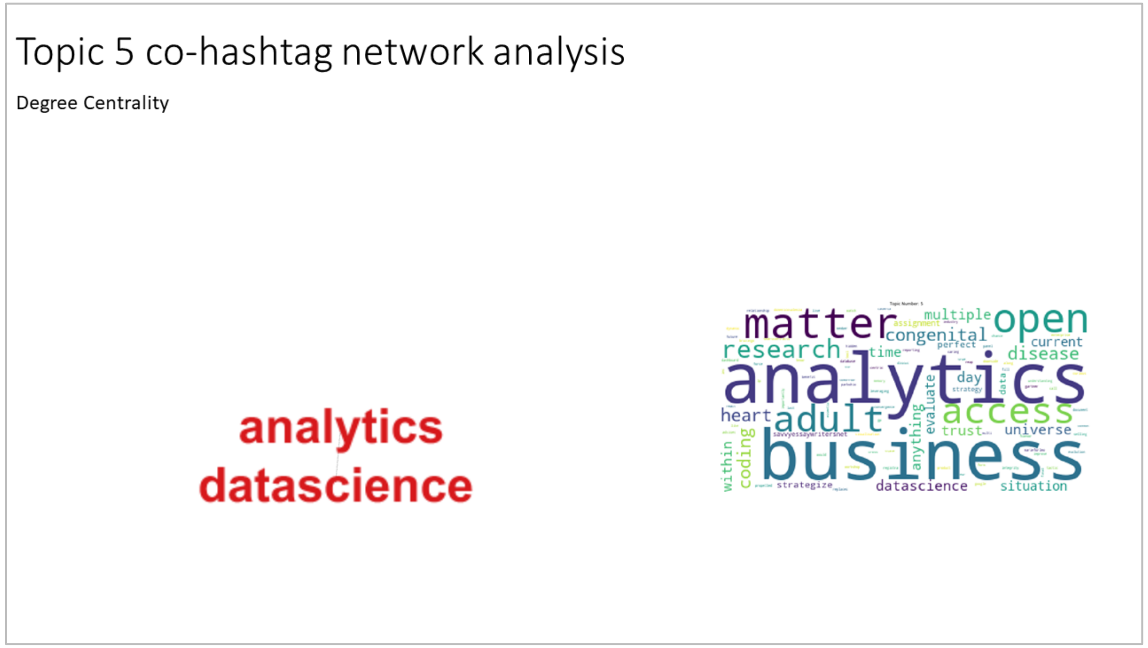
Analytics on Data Analytics Strategy

Ismael Rodriguez

MIS 670 Final Project

12 May 2020



Analytics on Data Analytics Strategy

Why data analytics strategy? Why Twitter?

What approach does this research take?

Why were the results?

What is the way ahead?

Why Data Analytics Strategy? Why Twitter?

Businesses undervalue data strategy

- Data strategy can be offensive or defensive (DalleMule and Davenport)
- Data can enhance strategic business aims (Ladley and Redmon)

K-State courses cover both defensive and offensive topics

- This study could identify coursework that addresses specific data strategy topics
- This study could reveal topics around which to build a specific course in data analytics strategy

DalleMule,Leandro and Thomas H. Davenport. "What's Your Data Strategy". Harvard Business Review, May-Jun 2017, https://hbr.org/2017/05/whats-your-data-strategy. Accessed 12 May 2020.

Ladley, John and THomas C. Redmon. "Use Data to Accelerate Your Business Strategy". Harvard Business Review, 03 March 2020, https://hbr.org/2020/03/use-data-to-accelerate-your-business-strategy?referral=03759&cm_vc=rr_item_page.bottom. Accessed 12 May 2020.

What approach does this research take?

Basic research plan

- Retrieve data from Twitter
- Clean and pre-process the data
- Analyze data
- Refine processes and optimize data sampling

Strengths of this approach

- Multiple iterations improved the quality of data
- Scalable approach, could and did handle much larger data samples
- Incorporated simple automation techniques

Limitations of this approach

- Multiple iterations led to varying quantities of data
- Multiple applications necessary to conduct research

What were the results?

Decriptive statistics: the final 55 tweets

Frequency analysis: visualizing clouds

Network analysis: mentions, hashtags, and links

Topic modeling: 14 topics, 55 tweets, so many combinations

Drill down: network analysis by topic

What is the way ahead?

One very fancy keyword search?

- Overall, the study yielded **modest** but encouraging **results**
- The real surprise came in combining topics with word clouds and network analysis

Strategic topics worth considering?

- Yes, but skewed toward **offensive** considerations: HR, operations, and logistics

Success at what cost?

- Success depends on quality data!
- Broader search topics yielded too much garbage
- This project veered toward **too little data**

Moving forward

- Explore **spatial** component of data
- Use predictive text analysis on the tweets of prominent **data analytics strategic thinkers**
- Adapt the model to **other** social media **platforms**

DalleMule,Leandro and Thomas H. Davenport. "What's Your Data Strategy". Harvard Business Review, May-Jun 2017, https://hbr.org/2017/05/whats-your-data-strategy. Accessed 12 May 2020.

Ladley, John and THomas C. Redmon. "Use Data to Accelerate Your Business Strategy". Harvard Business Review, 03 March 2020, https://hbr.org/2020/03/use-data-to-accelerate-your-business-strategy?referral=03759&cm_vc=rr_item_page.bottom. Accessed 12 May 2020.

Overview of the data

Not a lot of discussion: 55 Tweets.

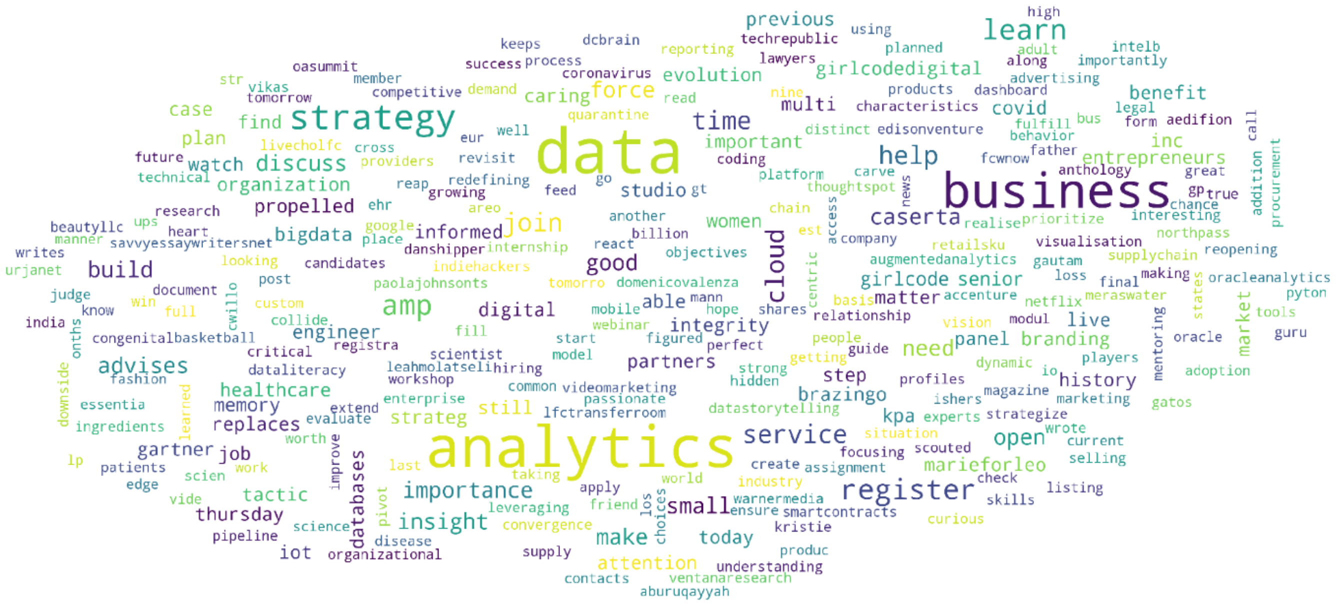
Initial Tweets: 87
Tweets without null values: 55

Basic Tweet Statistics:

Average Word Count:	18 words
Minimum Word Count:	6 words
Maximum Word Count:	28 words
Average tweet length:	130 characters
Minimum tweet length:	77 characters
Maximum tweet length:	144 characters

Top 5 Words

data	32
analytics	27
business	18
strategy	8
amp	5



Overall Sentiment

Data strategy is a positive

Vader Compound Scores

Total Positive: 33 tweets, mean score 0.52

Total Neutral: 21 tweets, mean score -0.25

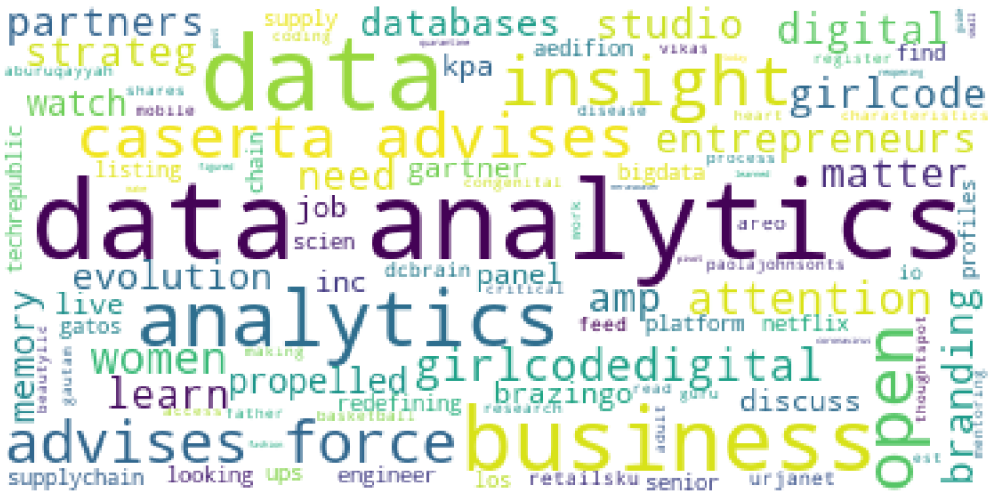
Total Negative: 1 tweets, mean score 0.00

Overall Sentiment

Data strategy is a positive

Vader Compound Scores

Total Positive: 33 tweets, mean score 0.52
Total Neutral: 21 tweets, mean score -0.25
Total Negative: 1 tweets, mean score 0.00



Overall Sentiment

Data strategy is a positive

Vader Compound Scores

Total Positive: 33 tweets, mean score 0.52
Total Neutral: 21 tweets, mean score -0.25
Total Negative: 1 tweet, mean score 0.00

Overall mention network analysis

Network analysis: mentions, hashtags, and links

Degree Centrality

Overall mention network analysis

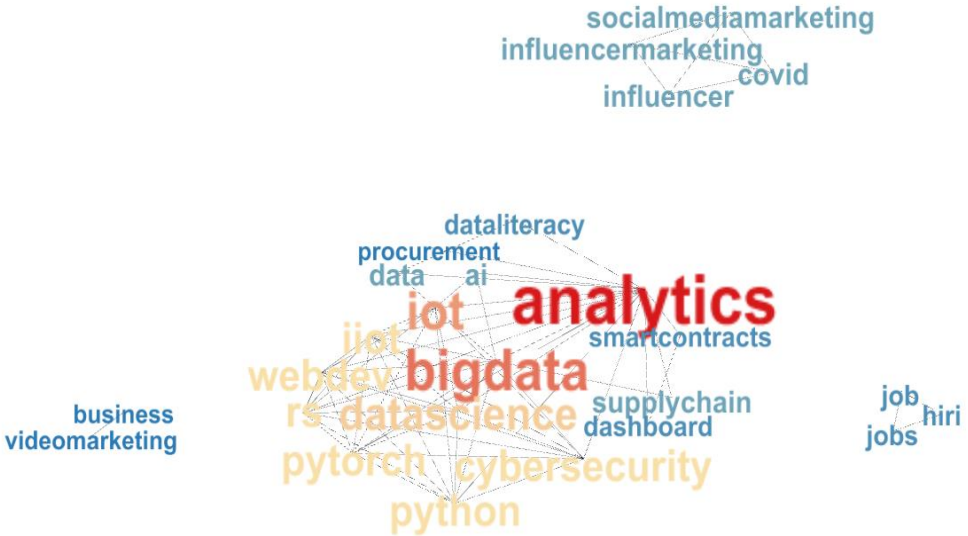
Network analysis: mentions, hashtags, and links

Betweenness Centrality

Overall co-hashtag network analysis

Network analysis: mentions, hashtags, and links

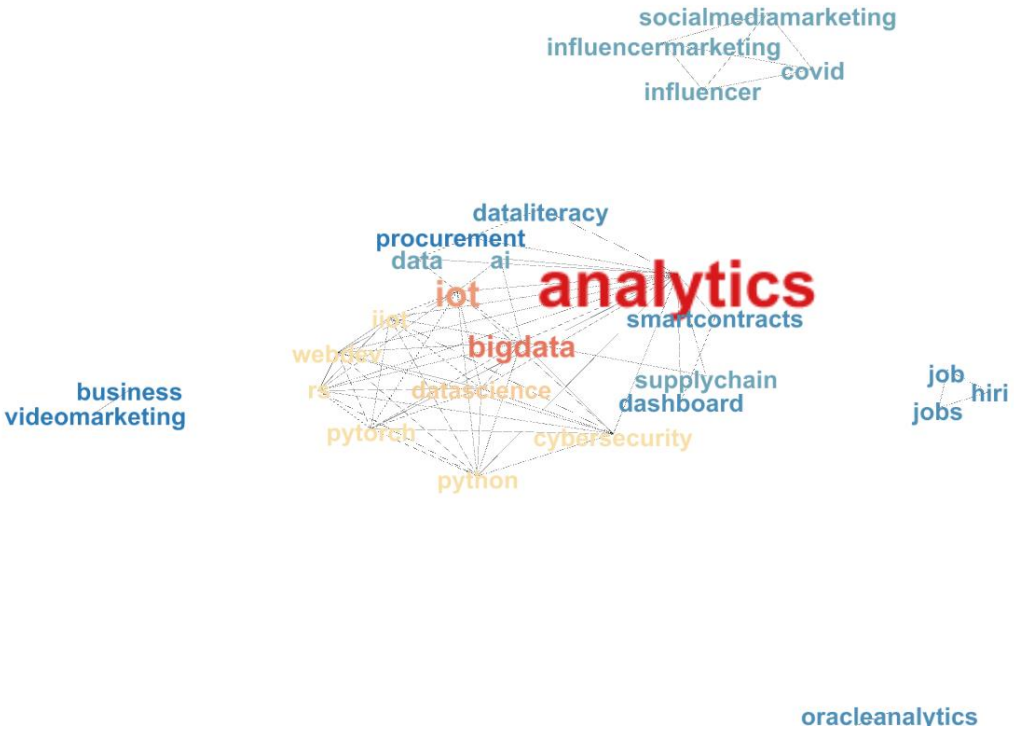
Degree Centrality



Overall co-hashtag network analysis

Network analysis: mentions, hashtags, and links

Betweenness Centrality



Overall link network analysis

Network analysis: mentions, hashtags, and links

Degree Centrality

Overall link network analysis

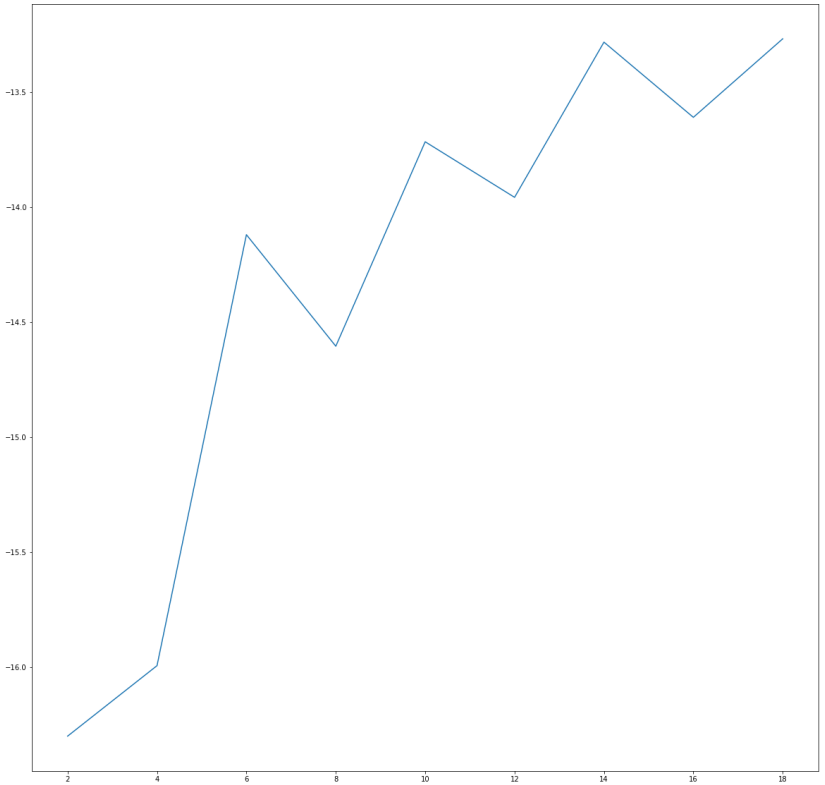
Network analysis: mentions, hashtags, and links

Betweenness Centrality

Topic Modeling

Topic modeling: 14 topics, 55 tweets, so many combinations

K Values



Topic Modeling

Topic modeling: 14 topics, 55 tweets, so many combinations

Words by Topic

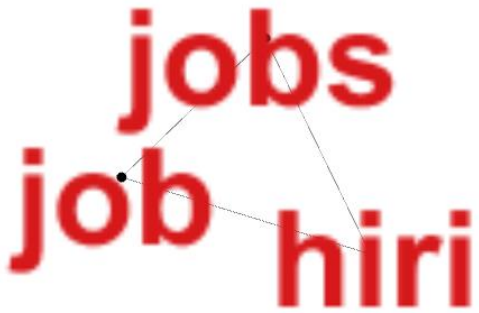
0: data , advises , caserta , force , business , analytics , kpa , job , partner , strateg
1: strategy , help , business , thoughtspot , mobile , paolajohnsonts , process , read , share , making
2: data , analytics , skill , candidate , technical , strong , demand , high , augmentedanalytics , start
3: informed , market , carve , edge , distinct , competitive , well , collide , data , analytics
4: data , analytics , engineer , senior , build , pipeline , passionate , custom , advertising , using
5: analytics , business , open , matter , heart , disease , congenital , coding , adult , access
6: data , analytics , register , cloud , multi , fcwnow , true , last , registra , workshop
7: business , else , find , northpass , edisonventure , still , vision , people , go , ingredient
8: business , amp , join , time , register , thursday , still , learn , unit , positively
9: service , dynamic , tool , learn , reporting , relationship , lp , improve , visualisation , insight
10: analytics , history , case , previous , data , win , loss , legal , lawyer , judge
11: today , prioritize , adoption , model , nine , healthcare , join , step , patient , provider
12: business , strategy , integrity , tactic , replaces , marieforleo , caring , importance , objective , vide
13: data , analytics , memory , discus , evolution , gartner , inc , brazingo , database , watch

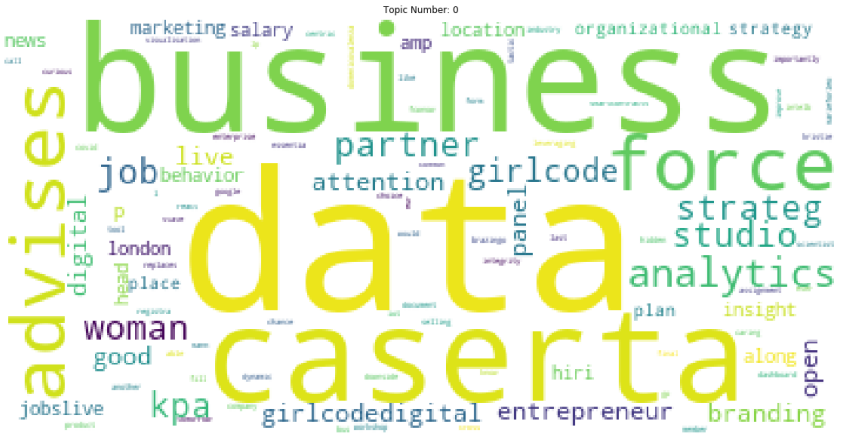
Topic Modeling

Topic modeling: 14 topics, 55 tweets, so many combinations

Topic 0 co-hashtag network analysis

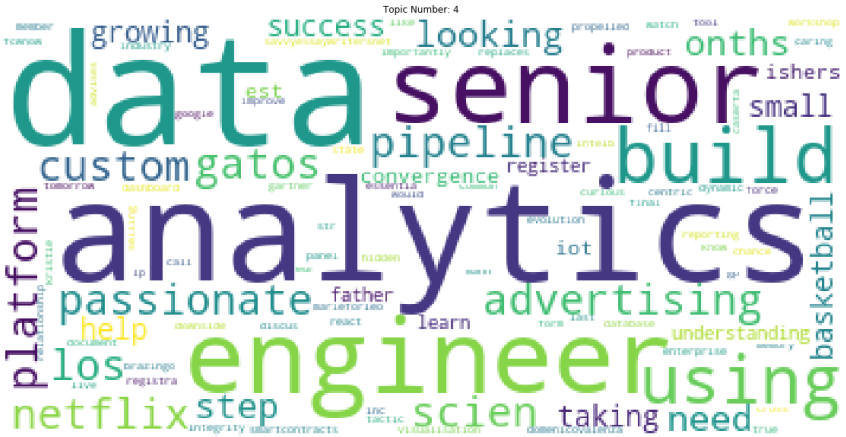
Degree Centrality





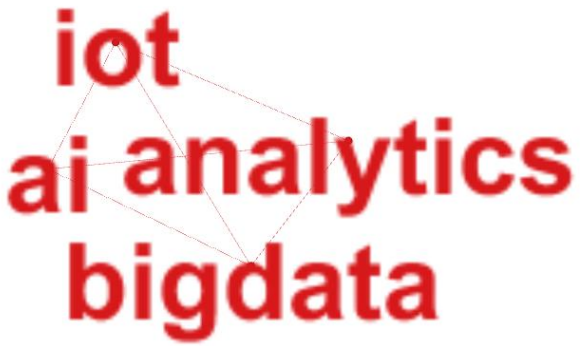
Topic 4 co-hashtag network analysis

Degree Centrality



Topic 6 co-hashtag network analysis

Degree Centrality

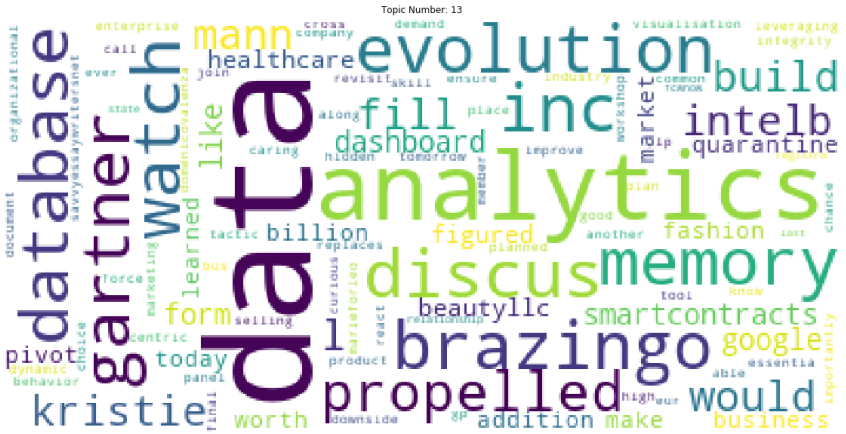


Topic 7 co-hashtag network analysis

Degree Centrality

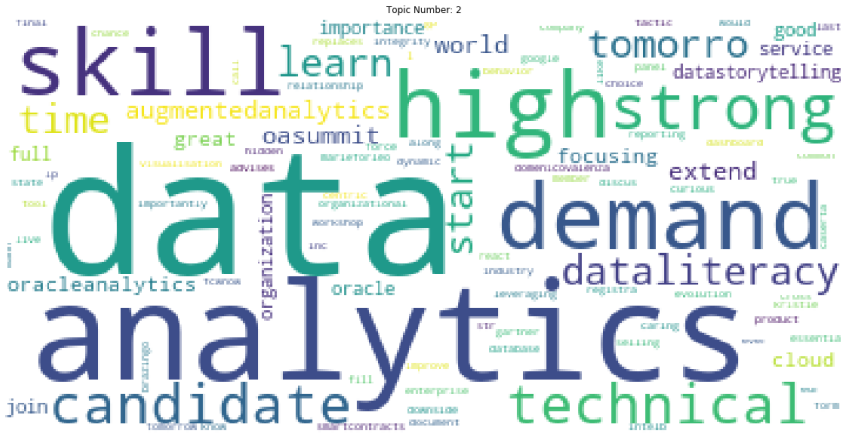
Topic 13 co-hashtag network analysis

Degree Centrality



Topic 2 co-hashtag network analysis

Degree Centrality



Topic 5 co-hashtag network analysis

Degree Centrality

Topic 8 co-hashtag network analysis

Degree Centrality

Topic 12 co-hashtag network analysis

Degree Centrality