XXX Group
7/21/18

Research Project: Results and Recommendations

Results

Purpose

The this document is to demonstrate our idea's practical feasibility considering XXX's present broadcasting programs, competitive landscape (across different mediums), data privacy constraints etc. We are sharing our approach to identify the topics whose portrayal (in terms of consistency and relevance) may not be aligned with the audience interests and coverage of other competitors. The coverage of these topics in XXX's programs can lead to increased customer retention (aged 35-65 years) and addition of new customers, particularly of different age segments (ranging from 25-55 years).
We also aim to give a brief overview of our solution proposal and its logic.

Initial Analysis

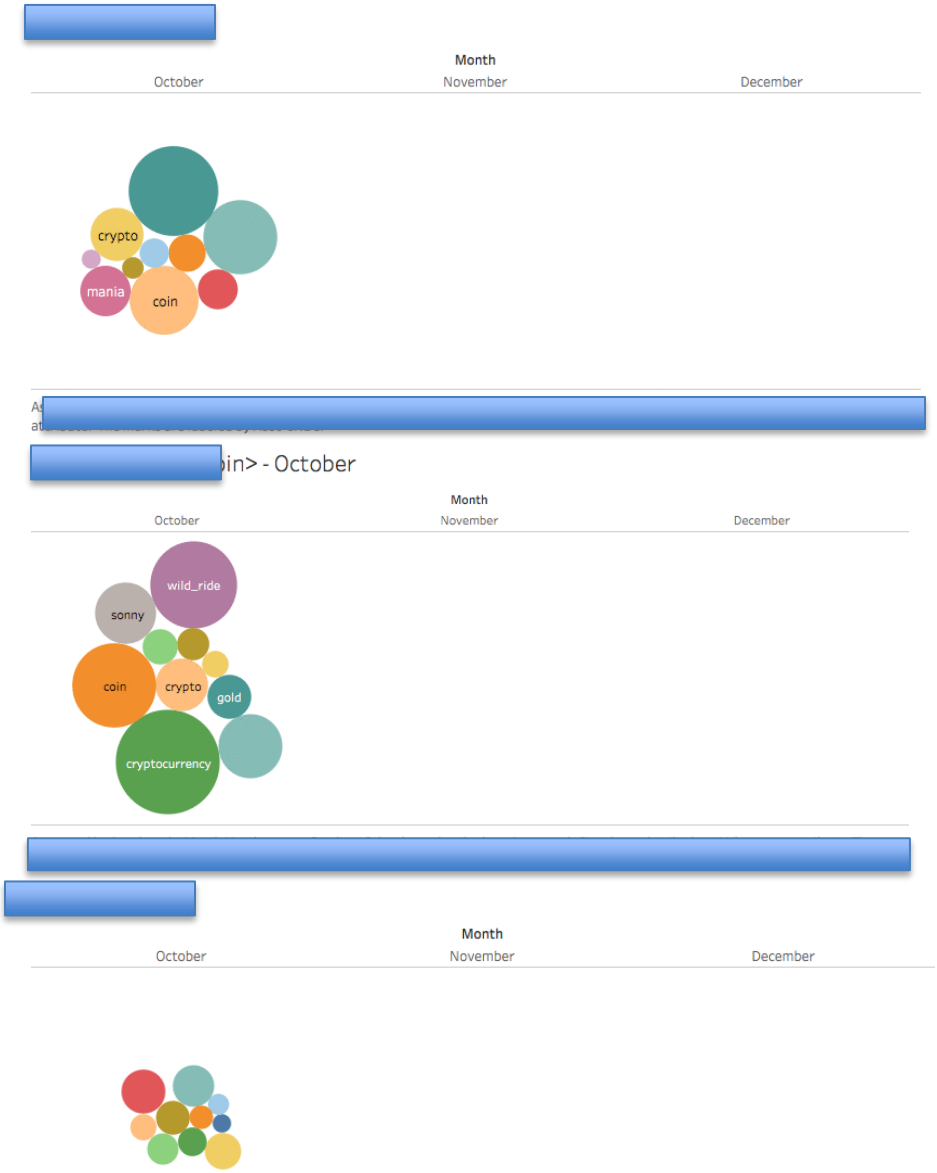
- *Competitive Landscape*
    - As a provider of business news, XXX faces competition from a wide variety of players - from traditional linear programming like XXX and XXX Business News to publications like the Wall Street Journal. However, in recent years the largest shift in the industry has come from the entry of digital-first providers like Cheddar and Business Insider. These digital-first providers appeal particularly to millenials, who consume news differently than previous generations, with Cheddar even being touted as "the would-be XXX of the internet". (Pierce, 2017)
    - [Content] Cheddar produces 6-8 hours of content daily, and like XXX, also broadcasts from the NYSE for an hour. (Pierce, 2017) The difference seemingly lies in its digital roots, giving it a young, conversational approach to news, with direct customer feedback and questions when they broadcast on Facebook live (where 60% of viewers are under 35) incorporated in programs. (Huddleston, 2017)
    - [Delivery] The competitors have a robust and improved digital framework which deliver real-time financial market news and information across a variety of platforms. For XXX alone, viewers can access content from XX different platforms, including Apple TV, Roku, Hulu, and Amazon Prime Video. (Cheddar.com, 2018)

Data Analysis

Note that in our original analysis, we used XXX as a main competitor, but after discussing with Andy have replaced XXX with Cheddar. For the purposes of

summarizing our original analysis, we have included XXX, though going forward will no longer being doing so.

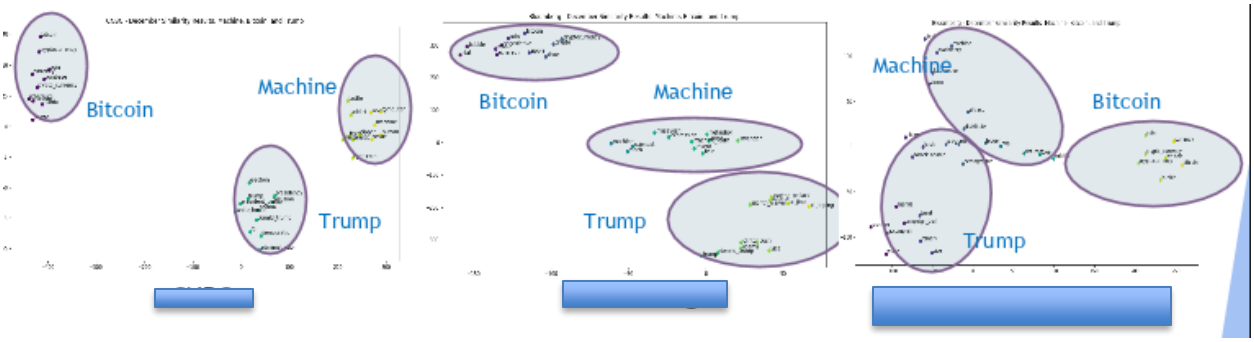
Changes in Top 10 Word Association with the key word ‘Bitcoin’



For each of the three word maps, we can see the major word associations for the word ‘Bitcoin’ for the months October - December. The size of bubble represents strength of the association and the thread connects of the same words. We found that from the same word, in this case ‘bitcoin’, the three companies’ associated words were all different. For instance, XXX showed the word ‘ethereum’ in December, while both of the other competitors showed the word, ‘bubble’. We assume that this might be related to

the relevance of news contents, and would like to further examine word associations over time.

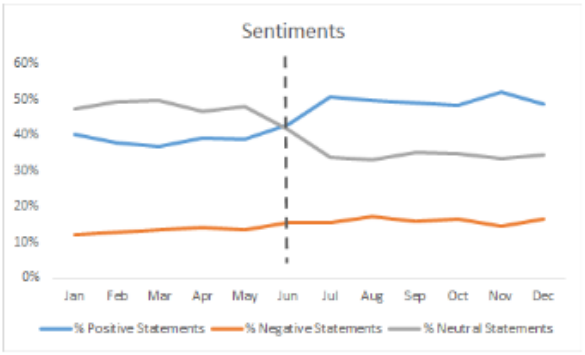
Word Association Map with the three words: 'Bitcoin, Trump, and Machine'

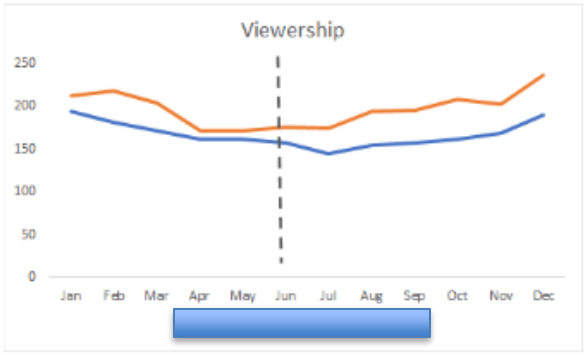


We took the output of the neural network and mapped how closely related associations were to the words 'Bitcoin', 'Trump', and 'Machine' for each of the three stations.

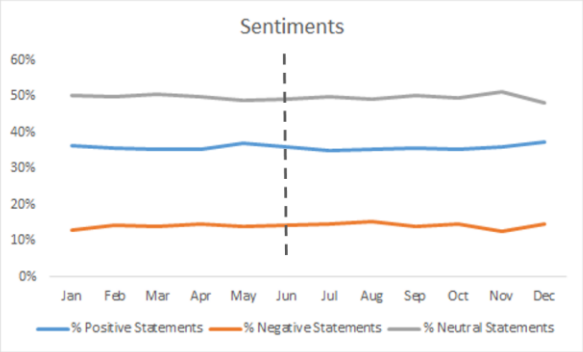
Preliminary Sentiment Analysis of 'Trump' in 2017 with business day viewership for XXX vs XXX Business News

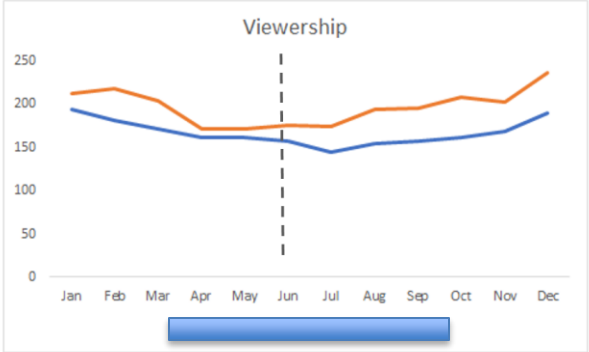
During the mid year, XXX might have shifted its portrayal of Trump to a more positive light: observable decrease in neutrality. We hypothesize that the portrayal of content is related to decrease in viewership seen in June 2017.





On the other hand, XXX Business News has portrayed Trump consistently in the similar light. We hypothesize that the portrayal of content is related to the increase in viewership starting June 2017.





Approach - Business Impact

Utilizing our current POC we will help XXX identify potential new topics for programming. As we saw in our initial analysis there are some topics that XXX might not be covering that its competitors are, which in turn led us to believe that there would be viewers who would switch to XXX's competitors instead to view news or coverage on such topics. We would implement our solution using the following steps:

- Based on frequency of trending terms on StockTwits, we are picking the top topics to track;
- Based on the topics, their associated words will be generated for both XXX and competitors on the 2017 transcripts data;
- Based on those associated words, we are tracking how these associated words change over time; (Volatility index will be calculated for the associated words)
- This is being executed on XXX/XXX/StockTwits data sources. The output would be how volatile these associated words are across different data sources.
- These differences can then be used to make topic/show decisions going forward.
- If the coverage of associated words for a topic is stable in StockTwits data but unstable (volatile) in XXX programming then XXX can provide more fixed time to the topic.

Recommendations

The proof of concept when implemented would enable XXX to identify:
1. Trending topics in business that their competitors are tackling consistently and exclusively.
2. Word association dynamics with each topic which can improve storytelling.

These insights can guide XXX in selecting potential topics to cover or focus on in regular programming, as well as provide new content ideas for non-linear programming

that can optimize the use of existing studios. With diversified content, XXX can utilize its digital properties and platforms to distribute more widely and extend their reach to different groups of audiences.

With the identification of the trending topics and the association of words with it across a certain time range from sources like stocktwits and XXX, XXX would be able to discover interesting content to explore and incorporate for future shows, topics, or even advertising categories.

Having multiple streams of varying content told over multiple platforms (TV, mobile, streaming sites, etc.) will allow XXX to cater to both its core audience as well as new demographics who may prefer different stories and different methods of consuming business news. The proof of concept (by utilizing the twitter/stocktwits) potentially would provide more insights into the business topics that the public is most interested in.

With the insights gleaned from our analysis, XXX will have to balance content creation using these topics with its own editorial voice. On top of this, increasing the amount of content produced has implications for its workforce across the board.

Limitations and Inherent Assumptions

The proof of concept currently has following limitations and assumptions:

1. The data is not available in real-time. There is an at-least 1 day lag being considered in the transcripts data that will be used in the project. New data sources might be required to be explored to satisfy this requirement.
2. The downloaded data is assumed to be an accurate picture of the programming of XXX and competition.
3. Only Weekdays data has been considered in the analysis based on the data received by XXX.
4. The XXX transcripts data is expected to be comparable to the competitors' data.
5. All non-prime time-shows are currently being considered together as a single unit without any sub-groups.
6. We assume that Stocktwits users are the target audience of XXX.