Slide 1

Hello, my name is Gordon Hew and I’ll be presenting the NBA Fan Engagement Case on the New York Knicks

Slide 2

The structure of the presentation is as follows:

We’ll first talk about the objective, then the data and approach, next we’ll analyzing the data quarterly and finally wrap up with my conclusions and recommendation.

Slide 3

The objective of this analysis to apply natural language learning techniques to Twitter data to discover insights about the Knicks.

Our key goals are to understand what drives mentions about the team, deep-dive into interesting terms, and observe sentiment around the team. Knowing these key points will help us engage our fans in a more meaningful way.

Slide 4

Let’s talk about the data. The data set contains approximately 5 million tweets regarding all teams across the NBA for over a period of a year. The tweet information contains a unique identifier of the tweet, it’s raw textual data, and its creation date.

Our approach is to first prepare our data for text processing. This means aggregating the data from different files, removing non-ascii characters and stop words, converting emojis and contractions, and filtering tweets to examine only those that pertain to the Knicks.

Since the qualifying data will take too long to process on a desktop computer, we split the data by quarter and sample 5% of the population. This translates to about analyzing 1.5-2.5k samples.

We then apply the NLP techniques of examining word frequency counts, word associations, and sentiment analysis.

Step 5

Our first time period is 2019 Q4 – roughly the start of the regular season.

We see some dominating general terms like nba, basketball, and game but we see a player, bullock, among these general terms. Performing word associations and cross-referencing news reports, we find that he was widely covered in the news due to the tragic murder of his sister in Baltimore.

This illustrates that the personal lives of the team can dominate what’s being tweeted.

Slide 6

For this time period we see that the sentiment is mostly positive 1072 to 837 and that anticipation, trust, and joy are among the most associated emotions with the tweets. This may be due to the excitement that comes with the start of play.

Slide 7

Moving on to 2020 Q1, we see some of the same terms continue to dominate. However, we see mentions of Kobe, Los Angeles, and the Lakers. This corresponds to his tragic death on a helicopter. Despite being associated with another team, his status in the sport dominated Knicks tweets.

Slide 8

We continue to see overall positive sentiment but a large magnitude of the tweets are associated with joy and anticipation as the season is underway.

Slide 9

Going into 2020 Q2, the same general terms dominate and we some mentions of coaches but there’s an interesting term – sasburneracct – which turns out to be a basketball meme account parodying commentator Stephen A. Smith.

Slide 10

In terms of sentiment, we still see positive sentiment but in terms of emotions, the magnitude of Joy has greatly decreased – probably due to the Knicks elimination from playoff contention.

Slide 11

In Q3, we no longer see general terms dominating but the mention of Thibodeau, the new coach hired by the Knicks

Slide 12

Again, sentiment is mostly positive but all emotions are more subdued with the exception of trust.

Slide 13

Lastly, we arrive at the last quarter of 2020 and the top term is an abbreviated curse word along with terms corresponding to the election such as vote and trump.

Slide 14

Examining the data, we see that this tweet by 50ct was frequently retweeted and how he’s going to forget New York as the Knicks don’t win anyway.

Slide 15

Sentiment remains very positive but this doesn’t seem to reflect 50ct’s outrage over the predicted tax rates of New York. An improvement on these models can be to include swear words and their contractions in their dictionary.

Slide 16

Our analysis found that news regarding players and coaches on and off the court dominate.

National events can also dominate even when it doesn’t directly pertain to the Knicks

Joyful sentiment was high until the end of the season.

Tweets were overall more positive than negative

Influencers and celebrities have an outsized voice.

In order to better engage fans and promote buzz, the Knicks social media team should actively engage celebrities/influencers/meme accounts while trying to promote positivity and retain joy