

Unleashing The Power of Gameday Data

White Paper
by

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Introduction:

The 2023 GameDay Analytics Challenge is focused on examining the Superbowl Advertisements' social media buzz on Twitter.

The Super Bowl is among the world's most-watched single sporting events and frequently commands the largest audience among all American broadcasts during the year. As such, it is a significant platform for advertisers to showcase their products and services. The reason companies are willing to pay an arm and a leg for time during the game is pretty simple -- a lot of people watch the **Super Bowl**.

Twitter is a popular social media platform that people use to discuss and share their thoughts about the game and the ads that aired during the event. Twitter provides several insights and analytics for advertisers who want to measure the impact of their Super Bowl ads. These include metrics such as the number of views, engagement rate, retweets, and impressions.

Advertisers can also use Twitter's Ad Studio to create and manage their campaigns, target specific audiences, and track their ad performance in real-time. Additionally, Twitter offers various tools and resources to help advertisers optimize their ad campaigns, such as best practices, case studies, and research reports.

Overall, Twitter is a valuable platform for advertisers to monitor and measure the impact of their Super Bowl ads, and they can use the platform's insights and analytics to make data-driven decisions to improve their campaigns.

The Purpose of this white paper is to provide suitable advice to the ad sponsors of the Super Bowl game whether the amount spent has provided the indispensable evidence that could influence the decision-making processes regarding current and prospective customers.

Gameday Stats at a glance:

No of Viewers: **113 Million**

No of Tweets: **1.916 Million**

Average Cost per 30 sec Ad-Spot: **\$7.0 Million**

Total Commercials air time: **50 minutes**

Total Ad business revenue: **\$ 700 Million**

Assumptions and Actions in Cleansing, Visualization of Data:

- **Technologies Used:**
 - Alteryx Designer
 - Microsoft Azure Cognitive Services (Language Service)
 - Python
 - Tableau
- **Actions Taken for Cleansing & Extracting data:**
 - Removed columns which are NULL/NA
 - Performed Sentimental Analysis of the Tweets in MS Azure
 - Separate columns were added – type of industry ads is related
 - Extracted the data- location from where the tweets are tweeted.

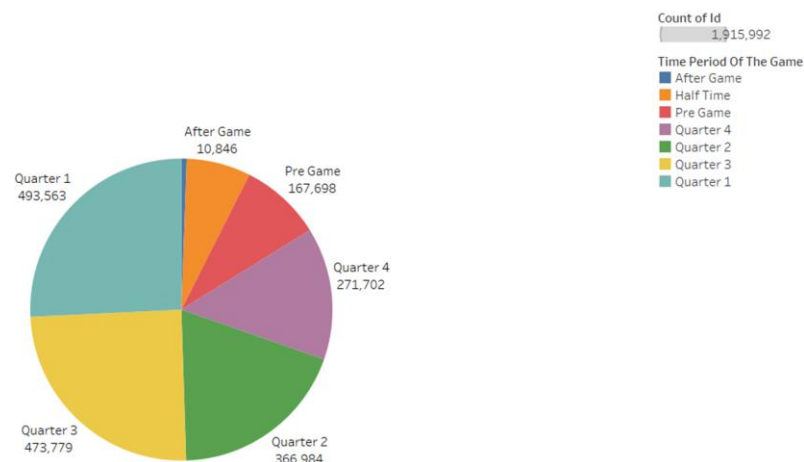
Sentimental Analysis:

Sentiment analysis is a popular technique used to extract opinions, attitudes, and emotions from text data. We have used various tools and technologies including Azure cognitive services, Alteryx, Tableau, Pandas, Azure Cognitive services API, and Python. Azure cognitive services provide natural language processing capabilities through its Language Service, which includes sentiment analysis.

We have utilized the Pandas library with pre-trained models from the Azure Cognitive services API for sentiment analysis. Further, Visualization of the results was done using Tableau.

Data Visualization:

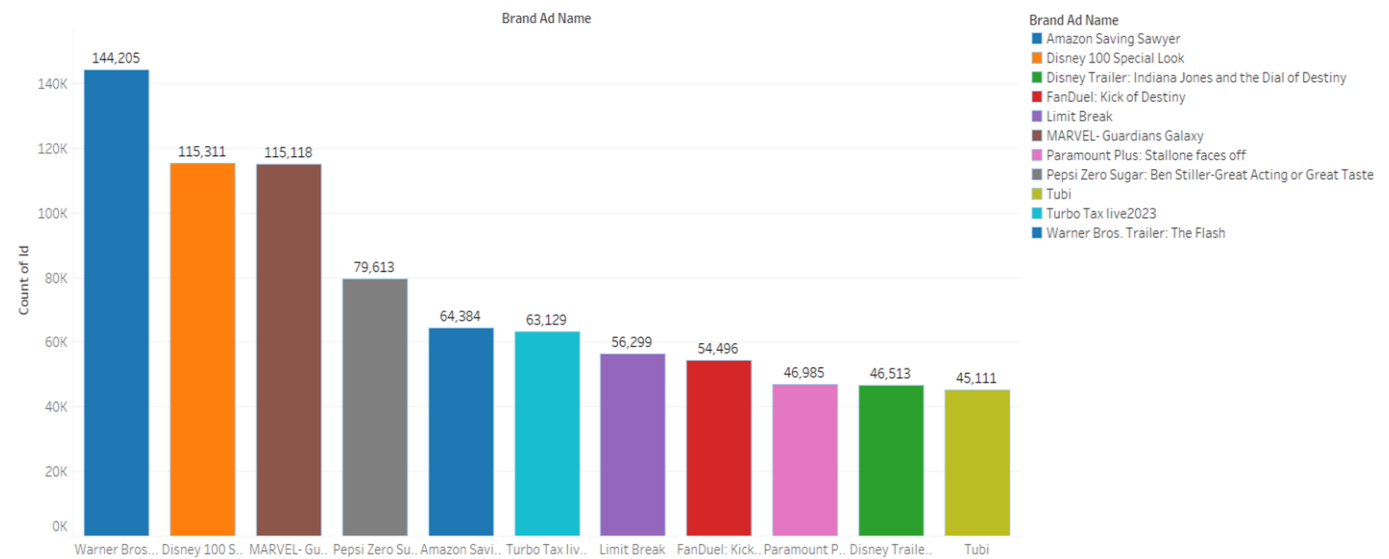
Below is the graphical representation of **1.916 million** tweets spread across all quarters of the game event.



In total, there are **19,15,993** tweets during the total duration of 5 hours. Quarter 1 followed by Quarter 3 had the highest number of tweets. In Q4, the twitter engagement is comparatively less due to strong audience connection with the game. Hence, any advertisement in the Q1/Q3 has maximum twitter reach.

Below are the Top Brand ads and the respective Tweet count for each of the brands.

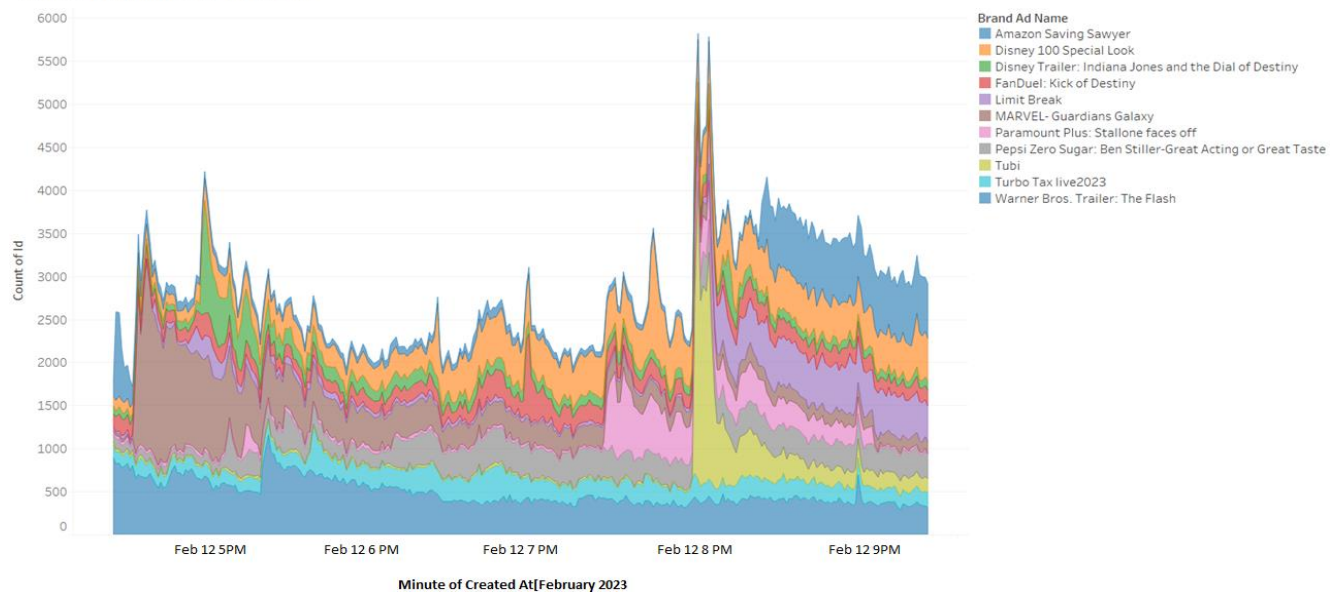
Topbrand



Count of Id for each Brand Ad Name. Color shows details about Brand Ad Name. The marks are labeled by count of Id. The view is filtered on count of Id, which includes values greater than or equal to 45,000.

Warner Bros: Trailer The Flash ad has garnered 1,44,205 tweets followed by Disney and Marvel. Due to its infamous characters and craze, the trailer created high buzz among tweeters.

Twitter Engagement Vs Brand



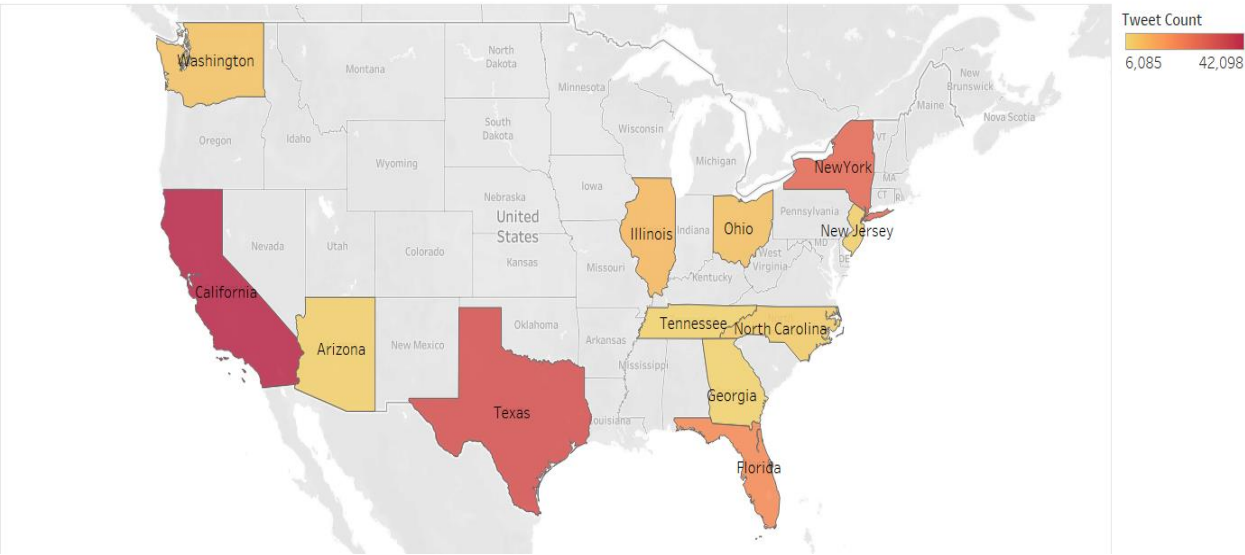
Above is the **heat map** of the various brands that were discussed at various durations of the game. When an ad was aired during the game, tweet engagement regarding that particular ad was done which can be observed with the spikes that occurred. For instance, the "Tubi ad was aired around 8 Pm and the buzz is clearly visible for after 8 pm with steep spike.

Further, we can infer that **Warner Bros** and **TurboTax ads** were discussed consistently right before start to the end of the game.

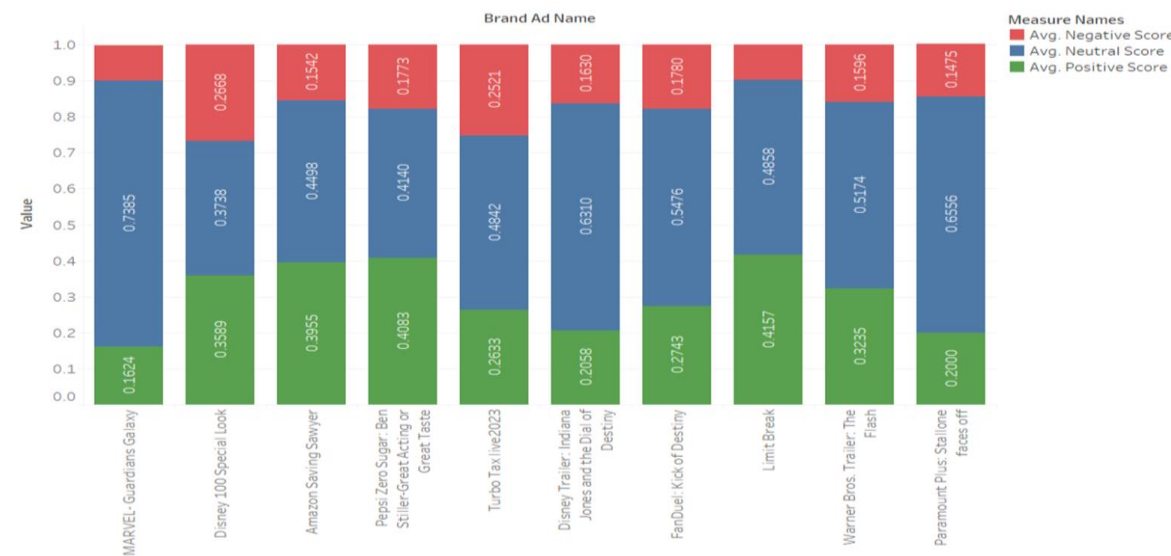
Analysis by geographical tweet location:

Being USA the major market for the Superbowl, analysis was confined to various states in USA and California is the clear winner with highest tweet engagement.

Tweets- Geographical spread(USA)

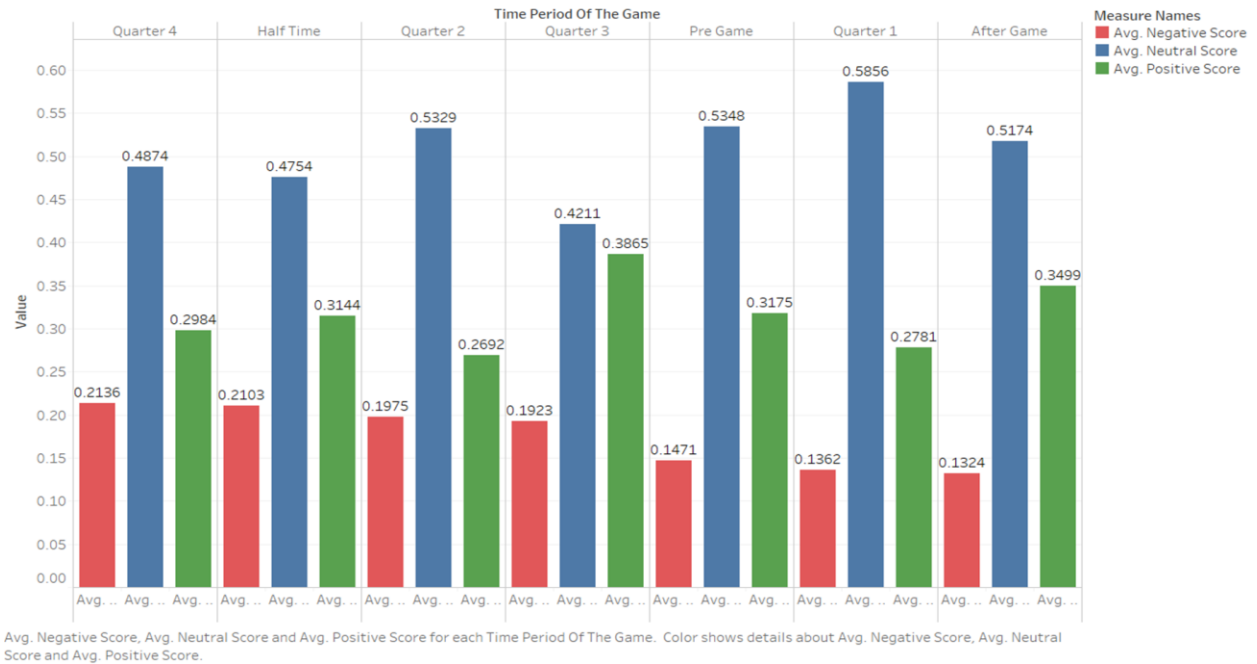


Sentimental Analysis of Trending Brands:



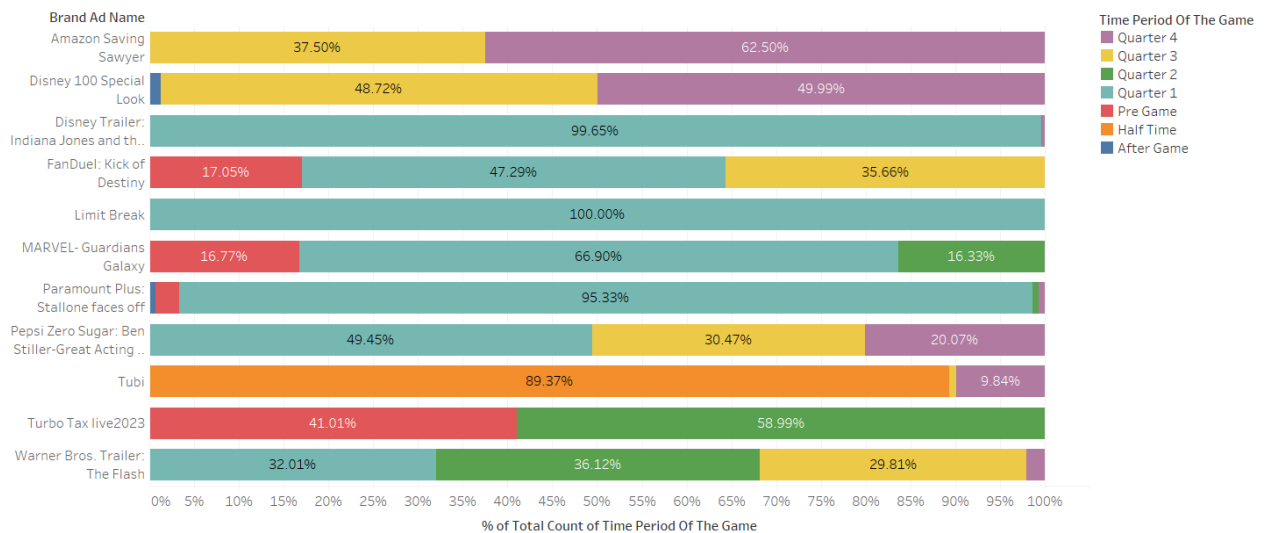
Sentimental analysis was carried out to obtain valuable insights into how people felt about a particular brand commercial on social media. The overall sentiment scores of all the ads observed to be mostly neutral to positive, indicating the well reception of the brand across various customer segments. **The top 10 brand commercials are depicted above.**

Sentimental analysis- Quarter wise



Further analysis was carried out to analyze the people overall feelings during the game across various quarters. It is noted that the overall neutral/ positive scores are observed in Q1.

Twitter Engagement of Brands across game duration



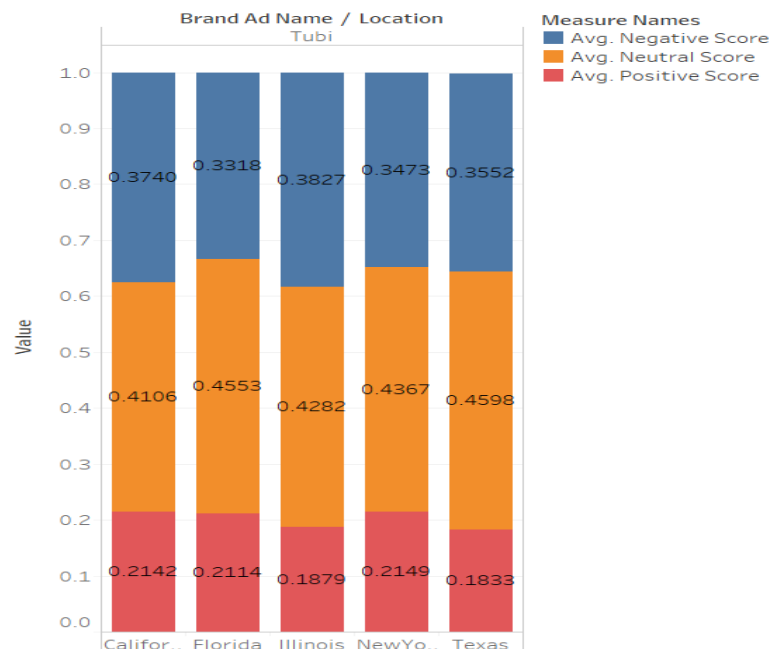
Above chart indicates the distribution of the ads during the total duration of the game. It was observed that certain brand commercials have twitter engagement across the game duration, where as certain commercials have engagement only in some quarters. For example, “**The Flash**” commercial had full length engagement where as “**Tubi**” had engagement only in the last two quarters.

Diving Deep into the analysis of Top commercials across geographical location and a business case of “Tubi in TEXAS”

Further, deep analysis was carried out to identify the region wise twitter engagement for trending brands. Certain commercials have uniform share of reception across various locations whereas certain brands such as “Tubi “ had variation across various geographical markets.

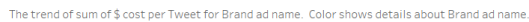


As per the graph, Tubi has the highest twitter mind share in “TEXAS” with 20.58% but only 11-12% share in other major markets. Further, the sentiment analysis of “Tubi” was carried out and observed that the sentiment scores are almost equal across markets.



With the above analysis of twitter reach at various markets and sentimental analysis, “Tubi” can deploy sufficient resources to convert twitter engagement in TEXAS into product users and focus on advertising into other areas such as California, New York, Florida and Illinois.

\$ cost /Tweet

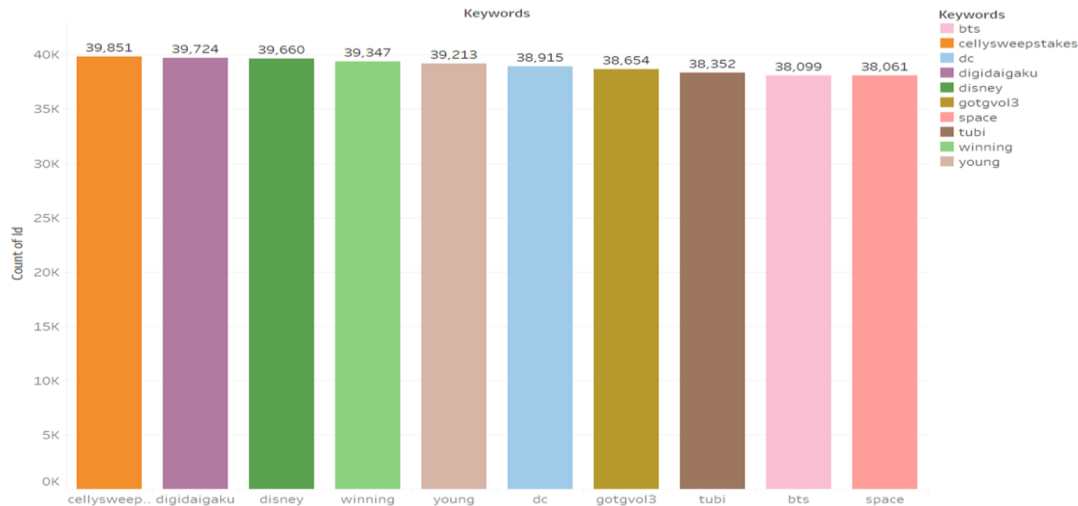


Word Cloud of Twitter #Hashtags



All the twitter hashtags of various tweets are analyzed and “word cloud” is created. The Superbowl-LVII is the highest trending hashtag, followed by “The Flash” and “Sweepstake”.

Keywords analysis:



The keyword **"cellysweepstakes"** refers to the sweepstakes or contest hosted by a company "Bud light". Sweepstakes is a type of promotional contest for generating buzz and engage with customers or followers. **"Bud Light"** has been successful in generating the most buzz across the Twitter platform during the game where its keyword was the most tagged Keyword.

The second Keyword which is the most talked on the Twitter during Super Bowl was **"DigiDaigaku"**. DigiDaigaku, an NFT project by Web3 gaming company Limit Break, aired an ad touting a free mint of its Dragon Eggs collection(tokens) during the game. While the tokens themselves did not cost anything to mint, **their value on the secondary marketplace soared** following their Sunday night ad.

Ingenious ad by "Tubi" and the customer connect:

In the highly competitive market and super buzz shows, drawing customer attention needs high creativity. Tubi, a streaming service bought by Fox in 2020, broadcasted two ads during the Super Bowl which are a 15-sec ad **"Interface Interruption"** and the 60-sec ad **"Rabbit Hole."**

With "Interface Interruption" commercial, Tubi had everyone scratching their heads and searching for their **TV remotes** like a crazy game of hide and seek when their 2023 Super Bowl ad aired on Sunday. The 15-second spot was a wild ride that left viewers on the edge of their seats and the tweet engagement spike during the ad is clearly visible in the charts.

Unique-Findings:

1. Data shows that "Tubi" with the right strategy and approach can convert the higher twitter engagement at "TEXAS" to business opportunities.
2. The time of airing ad also plays a vital role in the social media reach.
3. Media and entertainment industry followed by Food and beverage industry are the major contributors.
4. Ingenious ad by "Tubi" aroused user emotions and created indelible impact.
5. Sometimes, even presence of celebrity may not generate the adequate buzz in creating the required connect. For example, Remy Martin ad by Serena Williams fumbled during big game which generated only **15771(0.82%)** of the total tweets.

Limitations of Analysis:

Biased Sample: The gameday data and its perception of Twitter users are a small sample of the total general population, and not all people use Twitter to express their opinions. This could result in a biased sample of opinions that are not reflective of the wider population.

Data Quality: Sentiment analysis can be influenced by data quality issues such as data bias, errors, or missing data.

Limited Context: As Twitter users are only allowed a certain number of characters per post, people frequently express themselves in a truncated manner that lacks the complexity and depth of a comprehensive remark. This can make it challenging to fully comprehend the context and meaning of a tweet.

Limited Time Frame: Twitter sentiment analysis is limited to a specific timeframe, and it may not reflect people's changing opinions over time.

Summary:

In Conclusion, based on our data driven analysis, we can conclude that Twitter is one of the many platforms to make an assessment whether airing an ad during a Super Bowl game was effective or not.

When it comes to social media reach, everything matters to grab the attention of viewers be it the timing of the ad (Q1/Q2/Q3/Q4/ halftime), connect to the customer, ad duration, ingenious display of creativity, celebrity presence and sweepstakes. The Winning combination of great commercial in this time crunching and high buzz gaming event is the mix of everything that arouse the emotions of audience.

The success of the commercial that generates buzz on twitter and social media platforms, word-of-mouth impressions, foster brand loyalty and receive additional exposure—all of which eventually result in increased revenues.

Research References:

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