TWITTER HASHTAGS DATA ANALYSIS

(2021 – 2024)

Objective:

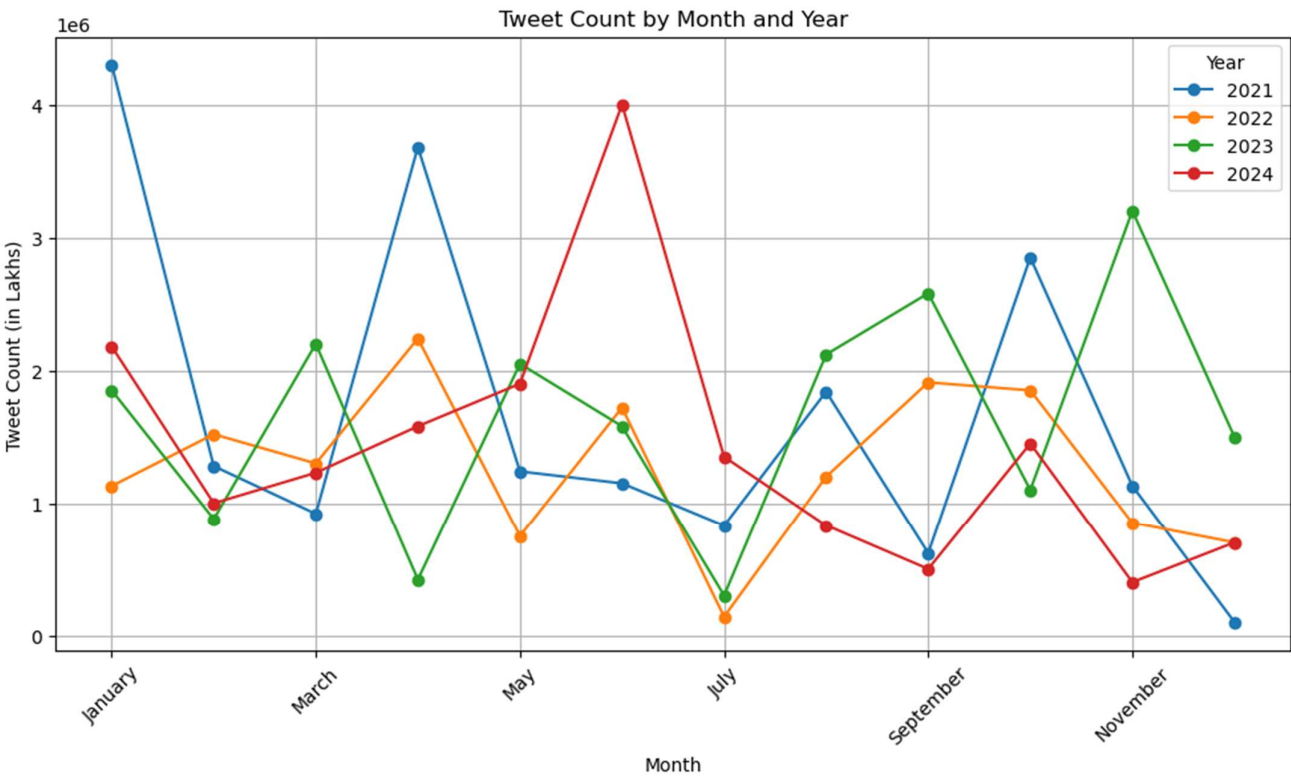To identify key patterns, trends, and, Sentiments on Twitter and Top Trending Hashtags across Years.

Dataset:

Collected Top 50 trending Hashtags by year 2021 to 2024

Data is not 100% accurate and was collected from different sources, such as Twitter and other websites.

ANALYSIS

Time Series Analysis:

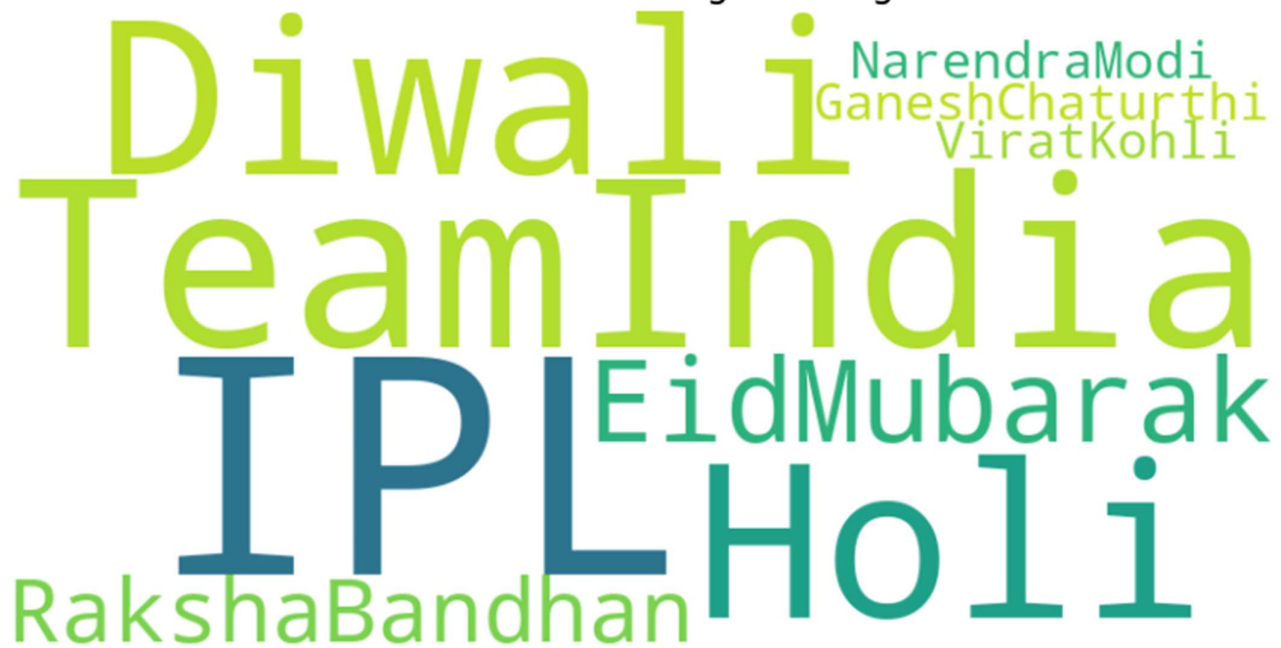# REASON FOR TREND?

Event Trigger Word Cloud

Here are 3 key insights from the Event Trigger Trends:

1. **Dominance of Entertainment and Sports** – Trends like *"Movie," "Release," "Series," "T20," "WC,"* and *"Premiere"* indicate that movie launches and sports events are major triggers for tweets.

2. **Significant Social and Political Events** – Terms like *"Election," "Speech," "PM," "Independence Day,"* and *"Budget"* suggest that political events and national celebrations drive engagement.

3. **General Trends and Public Interest Topics** – Words such as *"Festival," "Results," "Exam," "Announcement," "Death,"* and *"Surge"* highlight public concern around academic outcomes, major announcements, and crisis situations.
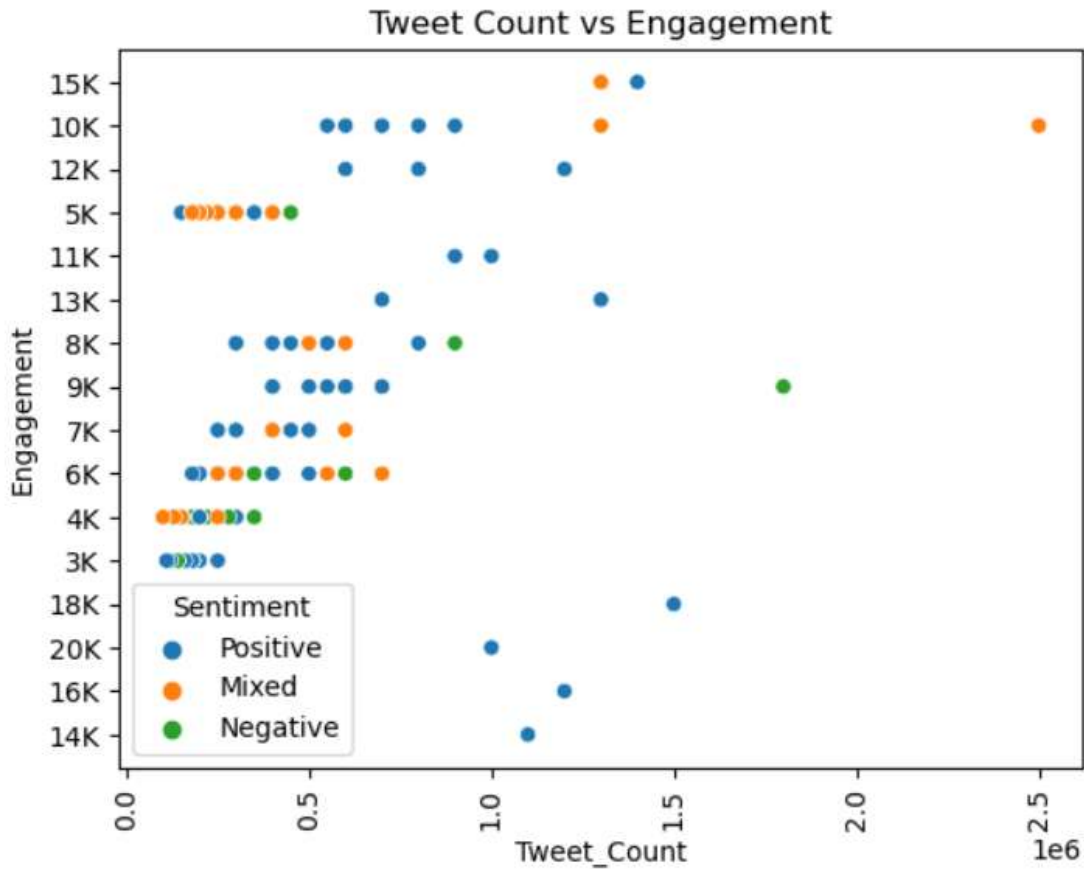
COMMON TRENDS ACROSS YEARS

Word Cloud of Common Trending Hashtags Across Years

Diwali NarendraModi GaneshChaturthi ViratKohli TeamIndia IPL EidMubarak Holi RakshaBandhan
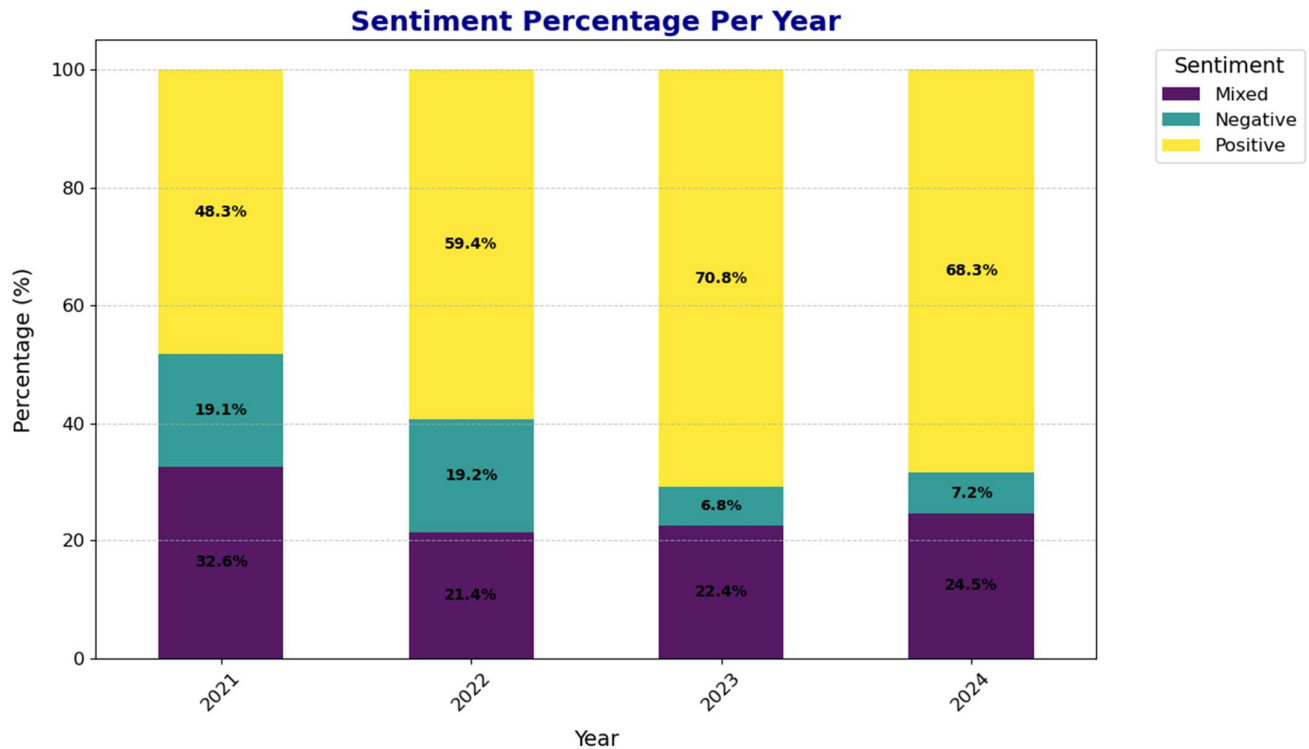
1. **Cricket's Strong Influence** – *"IPL"* and *"Team India"* indicate that cricket, especially the Indian Premier League (IPL) and international matches, remains a major social media discussion point.

2. **Festivals Dominate Social Media Trends** – Hashtags like *"Diwali," "Holi", "Raksha Bandhan", "Ganesh Chaturthi,"* and *"Eidmubarak"* suggest that Indian festivals consistently trend across years.

3. **Political and Celebrity Mentions** – Hashtags like *"Narendra Modi"* and *"ViratKohli"* reflect the strong presence of political and sports personalities in trending topics.

Tweet Count vs Engagement (Likes, Shares, and More)

1. **Positive Sentiment Dominates** – The majority of tweets show positive sentiment (blue points), suggesting that most discussions are favorable.

2. **Engagement Varies Widely** – While lower tweet counts have a concentrated engagement range, higher tweet counts show a more dispersed engagement pattern.

3. **Mixed Sentiment at Higher Tweet Counts** – Some of the highest tweet counts are associated with mixed sentiment (orange points), indicating that highly discussed topics may evoke diverse opinions.

SENTIMENTAL ANALYSIS OF TRENDS

1. **Increase in Positive Sentiment**

   o Positive sentiment has been rising steadily from **48.3% in 2021 to 70.8% in 2023**, showing an overall improvement in sentiment perception.

   o In 2024, there is a slight drop to **68.3%**, but it remains significantly high.

2. **Decline in Negative Sentiment**

   o Negative sentiment dropped sharply from **19.1% in 2021 to 6.8% in 2023**.

   o There was a small increase to **7.2% in 2024**, but the overall trend is downward.

3. **Fluctuations in Mixed Sentiment**

   o Mixed sentiment saw a major decline from **32.6% in 2021 to 21.4% in 2022**.

   o It slightly increased in 2023 (**22.4%**) and further rose to **24.5% in 2024**.

Key Insights:

- The general trend indicates a rise in **positive sentiment** and a reduction in **negative sentiment** over the years.

- Mixed sentiment has remained relatively stable after 2022, showing only minor variations.

- The sharp drop in **negative sentiment** suggests that public perception has become more favorable over time.

Positive vs Negative Sentiment Engagement
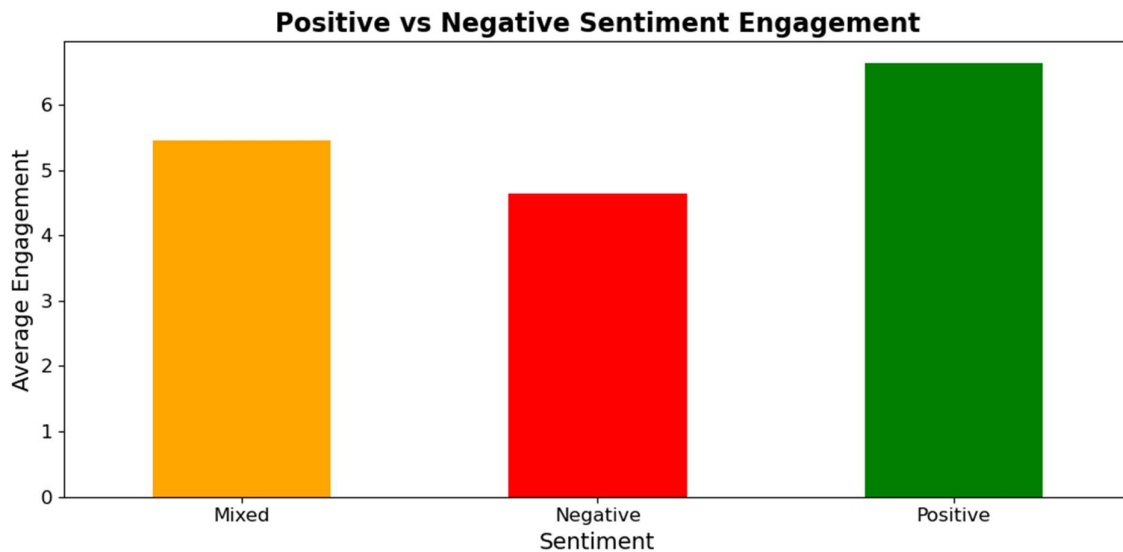
Analysis of Sentiment Engagement in Tweets

1. **Positive Sentiment Leads Engagement**

   o   Tweets with **positive sentiment** received the **highest average engagement** (above 6).

   o   This suggests that users interact more with **uplifting, exciting, or celebratory movie-related content**.

2. **Mixed Sentiment Engagement**

   o   Tweets with a **mixed sentiment** had the second-highest engagement (around 5.5).

   o   This could indicate that **debates, discussions, or controversial movie topics** generate significant interaction.

3. **Negative Sentiment Engagement is the Lowest**

   o   Negative sentiment tweets had the **least engagement** (around 4.5).

   o   This suggests that **criticism or negative opinions about movies** may receive relatively lower interaction.

Key Insights

- **Positive content drives the most engagement**, likely due to excitement about new releases, actors, or movie reviews.

- **Mixed sentiments still hold strong engagement**, hinting at user interest in controversial or thought-provoking discussions.

- **Negative sentiment sees the lowest engagement**, meaning criticism or backlash doesn't spread as much compared to positive hype.

REACH AND ENGAGEMENT

Common Hashtags Reach Across Years:

Heatmap of Common Hashtags Across Years
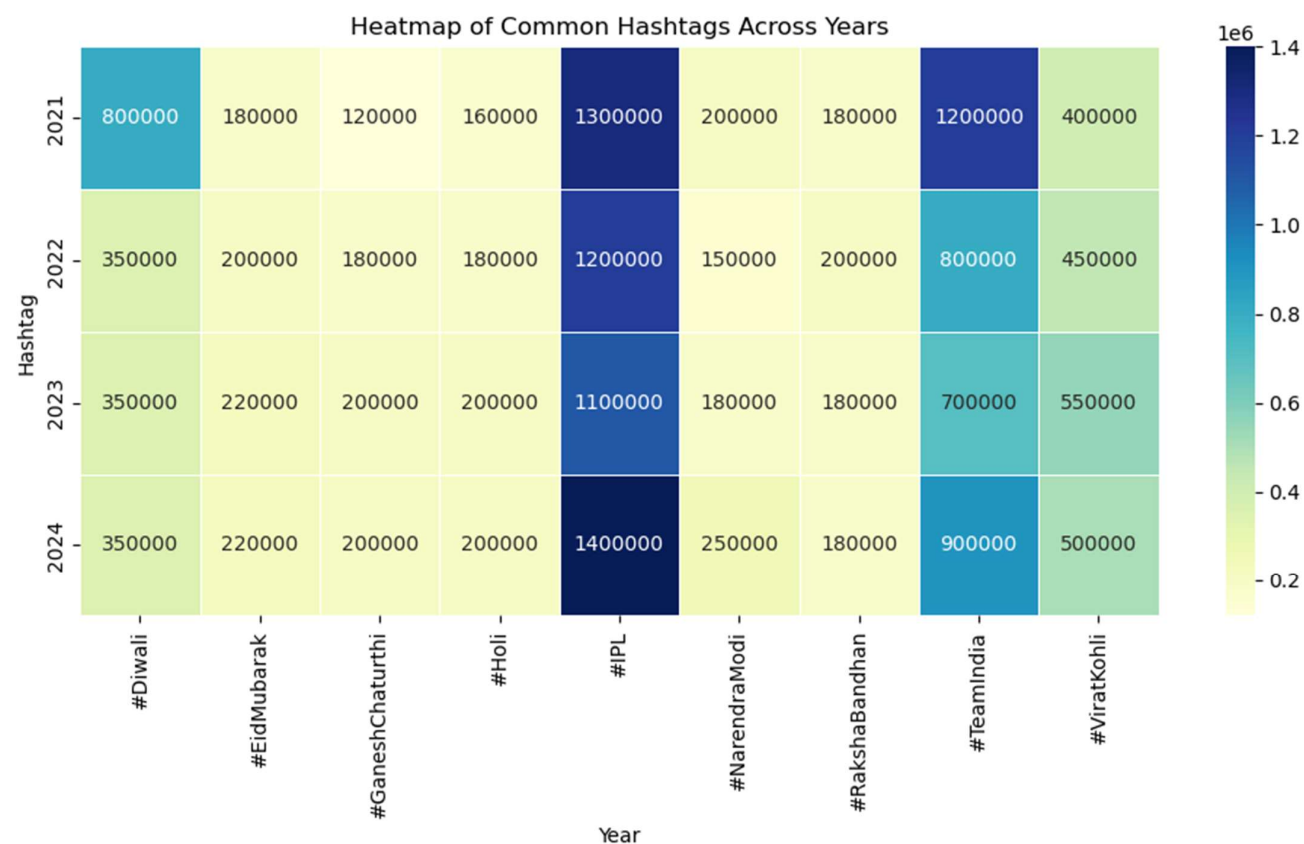
This heatmap provides a yearly breakdown of the popularity of common trending hashtags. Key observations:

1. **IPL's Consistent Dominance** – *#IPL* has the highest mentions across all years, peaking at **1.4M** in 2024, highlighting the continued craze for cricket.

2. **Festival Trends** – *#Diwali* saw a significant drop after 2021 (from **800K** to **350K**), while *#Holi* and *#GaneshChaturthi* have seen a steady rise.

3. **Political and Celebrity Trends** – Mentions of *#NarendraModi* increased in 2024 (**250K**), indicating a surge in discussions. *#ViratKohli* has remained steady around **400K-550K** over the years.

4. **Rise of #TeamIndia** – The hashtag saw fluctuations but remained significant, reaching **900K** in 2024.

Top Hashtags Avg Engagement:

Top Hashtags by Average Engagement
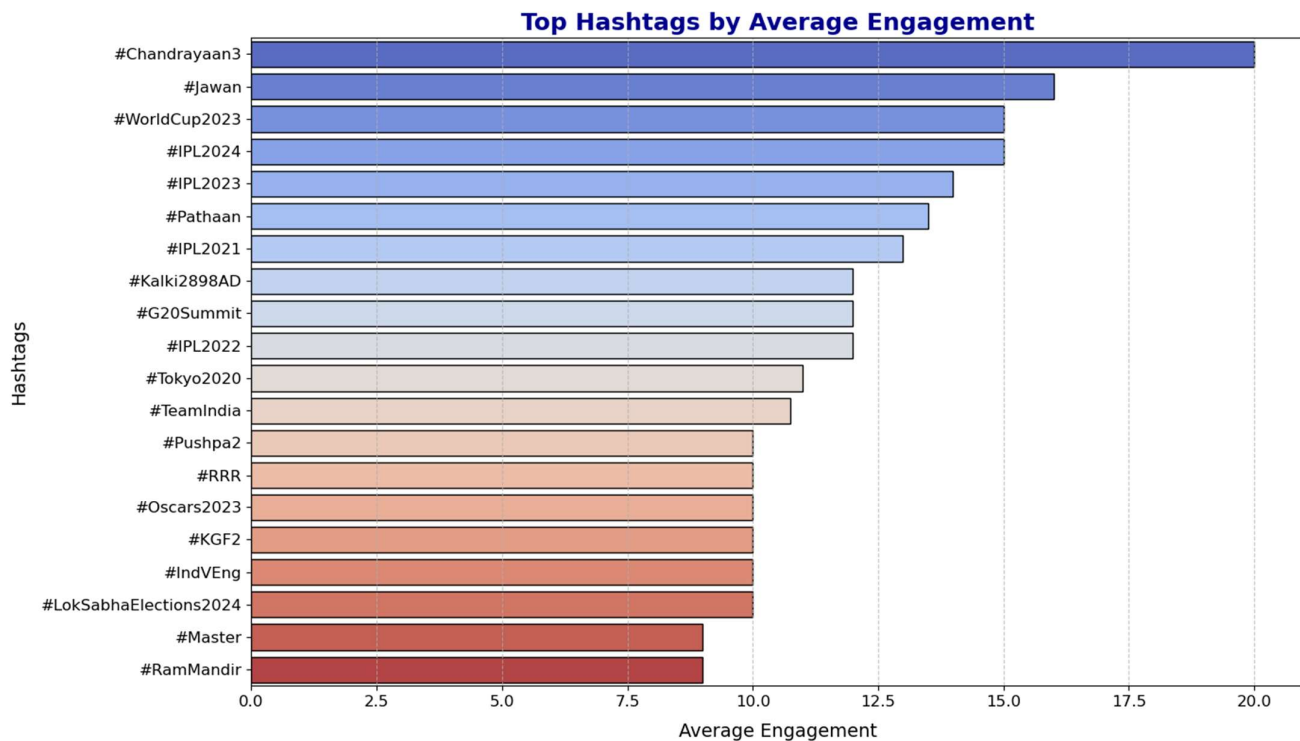
Key Insights:

1. **Scientific and Space Exploration Lead** – *#Chandrayaan3* dominates with the highest engagement, reflecting strong public interest in India's lunar mission.

2. **Cinema Craze** – Bollywood & South Indian films like *#Jawan*, *#Pathaan*, *#Kalki2898AD*, *#Pushpa2*, and *#RRR* received significant engagement.

3. **Cricket's Influence** – Multiple IPL-related hashtags (*#IPL2024, #IPL2023, #IPL2021, #IPL2022*) and *#WorldCup2023* ranked high, indicating cricket's immense social media traction.

4. **Global and National Events** – *#G20Summit, #Tokyo2020, #Oscars2023, #LokSabhaElections2024, #RamMandir* show engagement in political, international, and cultural events.

5. **Sports and National Pride** – *#TeamIndia, #IndVEng* emphasize cricket's role in digital engagement.

Top Hashtags Tweet Count:
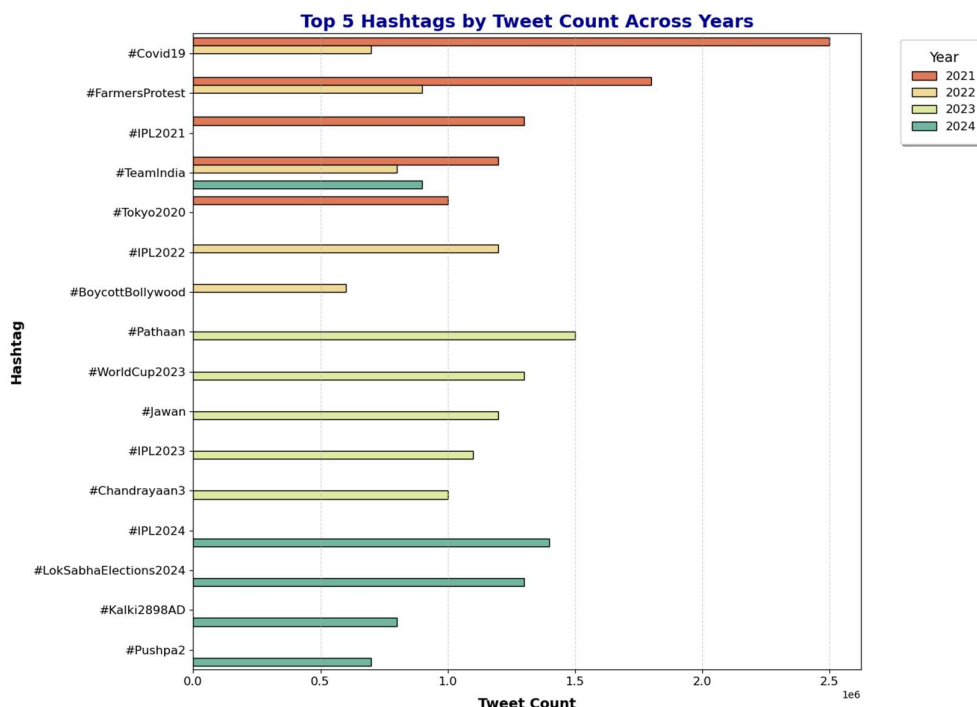
This bar chart presents the **Top 5 Hashtags by Tweet Count Across Years (2021-2024)**, offering insights into trending topics over time.

Key Observations:

1. **Pandemic and Protests Dominated 2021**

   o *#Covid19* had the highest tweet count, reflecting the global impact of the pandemic.

   o *#FarmersProtest* saw massive engagement due to the large-scale protests in India.

2. **Cricket's Unwavering Popularity**

   o *#IPL2021, #IPL2022, #IPL2023, #IPL2024* consistently appeared across years.

   o *#WorldCup2023* and *#TeamIndia* had significant engagement, reinforcing India's cricket craze.

3. **Entertainment and Bollywood Trends**

   o *#BoycottBollywood* in 2022 indicates social media movements against the film industry.

   o *#Kalki2898AD, #Pushpa2, #Pathaan, #Jawan,* show that South Indian and Bollywood movies had massive online discussions.

4. **Space, Elections, and Global Events in 2023-2024**

   o *#Chandrayaan3* had high engagement, showcasing India's space exploration success.

   o *#LokSabhaElections2024* became a major topic as elections approached.

   o *#Tokyo2020* remained relevant in 2021 despite delays due to COVID-19.

MOVIE TWEETS ANALYSIS

Top Tweets by Movies
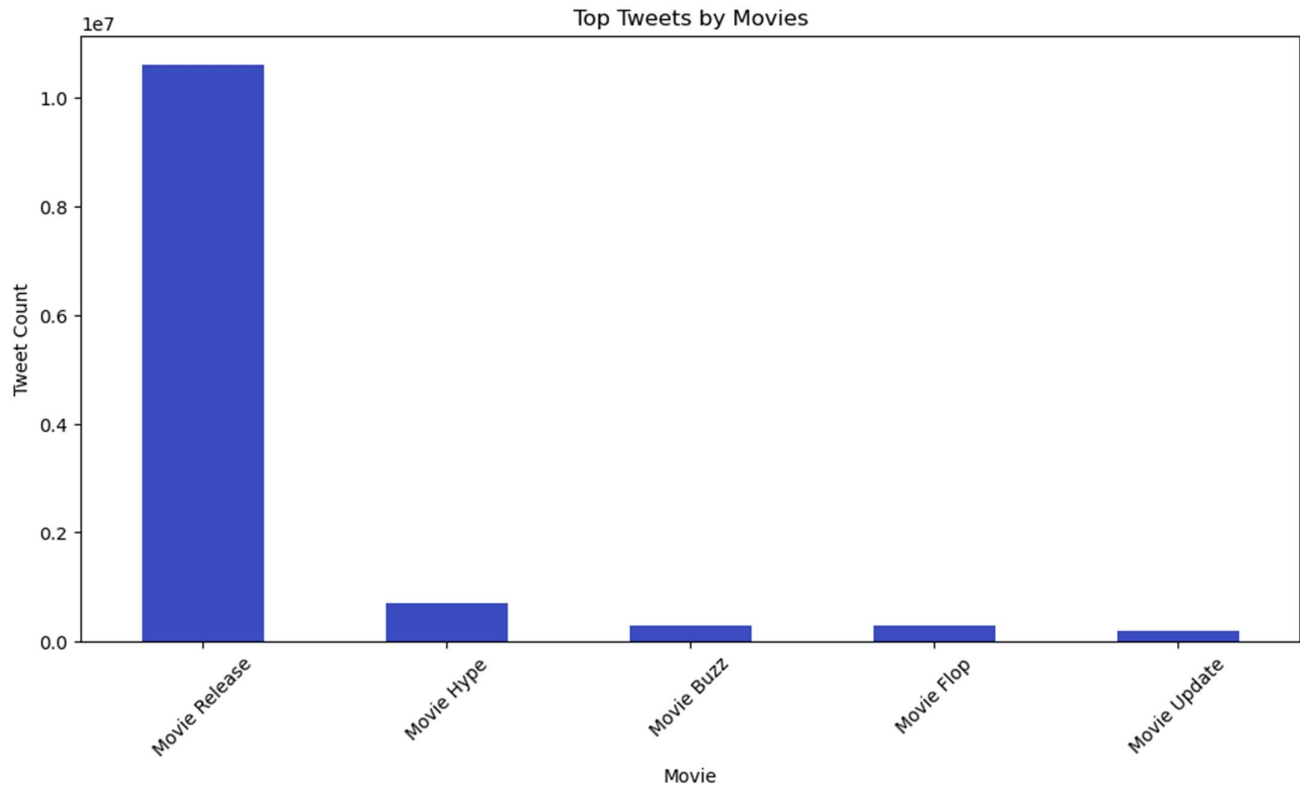
1. **Dominant Tweet Count for "Movie Release"**

   o The number of tweets related to "Movie Release" is significantly higher than any other category, exceeding 10 million tweets.

   o This suggests that audience engagement is highest around the time of a movie's release.

2. **Comparatively Lower Engagement for Other Categories**

   o Other categories like "Movie Hype," "Movie BUZZ," "Movie Flop," and "Movie Update" have relatively low tweet counts.

   o Among them, "Movie Hype" shows a slightly higher engagement than the rest, indicating some pre-release interest.

Average Engagement of Top Movie Releases
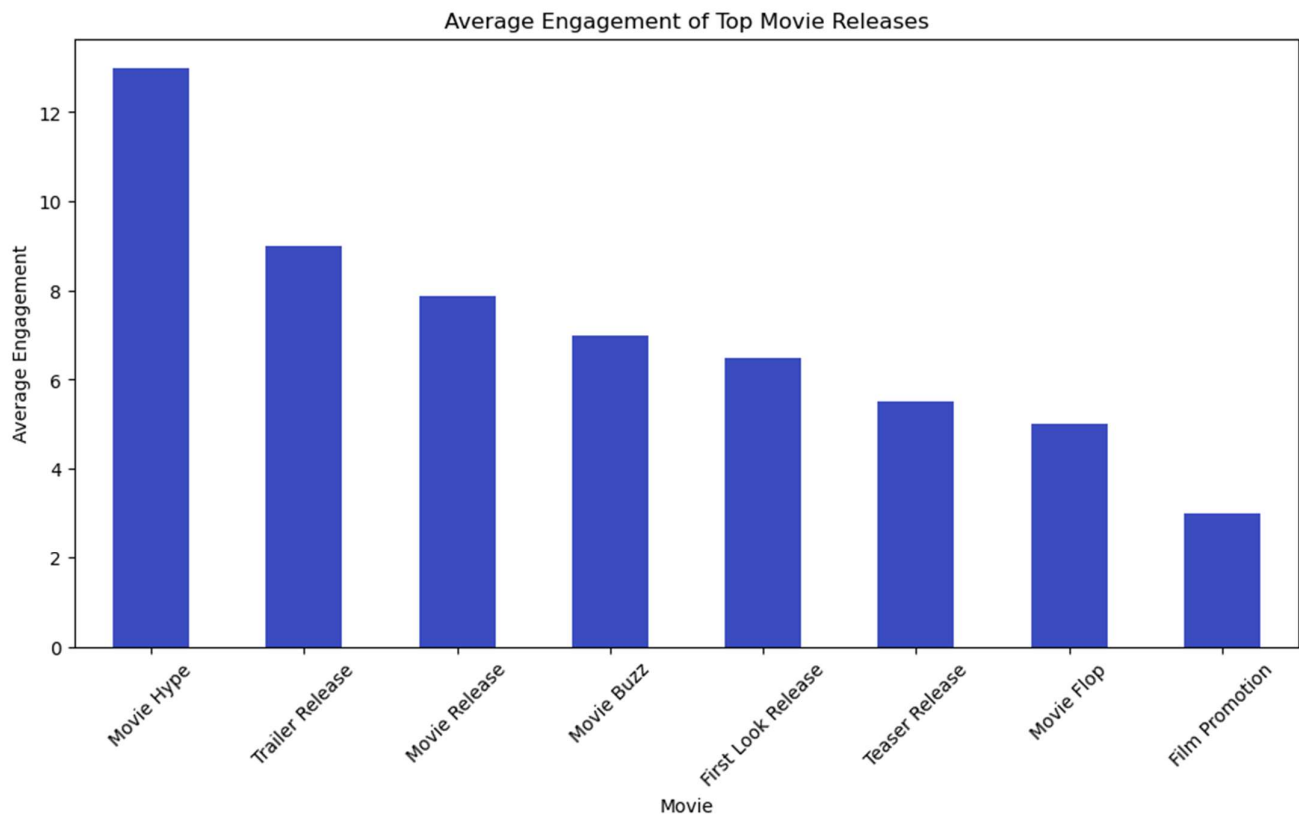
1. **Highest Engagement for "Movie Hype"**

   o "Movie Hype" has the highest average engagement, exceeding 12 units, indicating strong audience anticipation before a movie release.

2. **Gradual Decline in Engagement**

   o "Trailer Release" and "Movie Release" also receive high engagement, though slightly lower than "Movie Hype."

   o "Film Promotion" has the lowest engagement, suggesting that post-release marketing may not generate as much audience interest.

Trend of Movie Event Trigger Tweets by Year
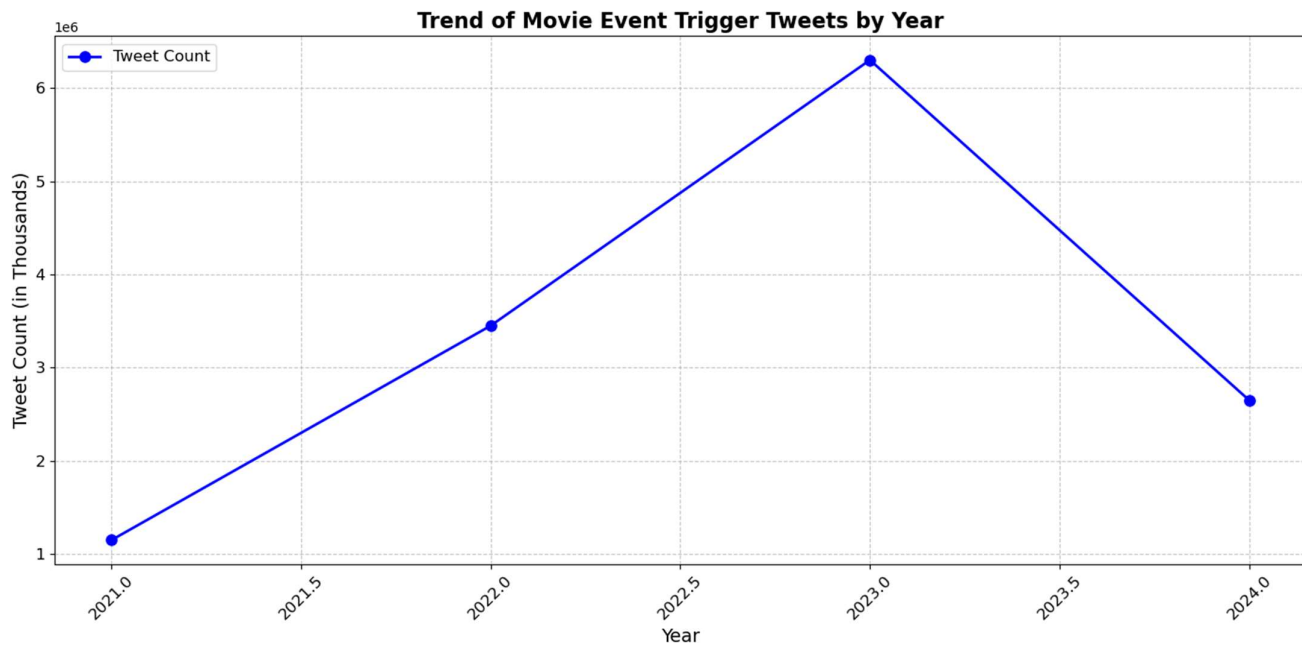
Analysis of Movie Event Trigger Tweets by Year

1. **Steady Growth from 2021 to 2023**

   o   The number of tweets related to movie events increased consistently from **2021 to 2023**.

   o   The highest tweet count was recorded in **2023**, reaching over **6 million tweets**.

2. **Peak in 2023**

   o   The **tweet count peaked in 2023**, indicating a surge in discussions about movie events.

   o   reasons for **major movie releases, viral trends, or significant industry events**.

   o   **2023** has some unforgettable movies Like Salaar, Animal, Jawan, and Adipurush, Which have kept the movie trending all over the year.

3. **Sharp Decline in 2024**

   o   The number of tweets dropped significantly in **2024**, falling below **3 million**.

   o   This decline could be due to **a decrease in blockbuster releases, changes in audience engagement, or shifts in social media trends**.

Key Insights

- Engagement with movie events increased rapidly from 2021 to 2023, with 2023 being the peak year.

- 2024 saw a notable decline, suggesting a change in audience behavior or industry factors affecting discussions.

Correlation:

Correlation Heatmap: Tweet Count vs Engagement

Tweet Count Distribution cross Years