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**Essay / Assignment Title: Designing a Tableau Dashboard for Social Media Data Analytics**

**Programme title: Visualization and Story Telling using Tableau**

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# INTRODUCTION

Social media is one of the modern communication systems for social mingling through the virtual medium of internet. Even if it is across the two corners of the planet, technology has reduced the distance between individuals, where people can still interact through social media (Prasanna et al. 2020). Social media has now become an important aspect of the human lifestyle. It is the modern way of keeping in touch with people we know and being aware of currents. The demand of using social media has grown worldwide and has brought some drastic changes in our day-to-day life.

In this project, we focus on creating a dashboard of analytics on Tableau for a famous social media platform “Twitter”. Twitter is a popular social media platform which allows its users to post and share short messages called "tweets". These tweets are limited to 280 characters, which encourages concise and crisp communication. The features for instant updates of opinions, news sharing and engaging in conversations on a wide range of topics makes it’s a best real-time platform in nature. When it comes to key features and aspects of twitter, it constitutes some of uniqueness from other platforms.

Here are some:

* Tweets: These are the messages or posts that users post or share. They can be made up of text, images, videos, links, and hashtags.
* Followers: Twitter users have the option to follow others to view their tweets in their timelines. When you follow someone, their tweets will be shown in your feed, allowing you to stay up to date with their content.
* Like Buttons: The heart-shaped 'like' button is used by users to show their appreciation for a post by liking tweets.
* Retweets: Users can retweet other people's tweets and share them with their own followers, which is a way to spread interesting or important content.
* Hashtags (#): Hashtags, which are keywords or phrases preceded by the '#' symbol, are utilized to classify, and uncover tweets related to specific topics or events. E.g.: During the FIFA World Cup, #WorldCup can be utilized to locate tweets that are related to the tournament.
* Lists: It's easy for users to create lists to organize accounts they follow into specific categories, making it easier to keep track of content from different sources.
* Trends: Trending topics and hashtags are shown on Twitter to indicate what is currently popular and widely discussed on the platform.
* Direct Messages (DMs): Private messages can be sent to each other through Twitter's direct messaging feature by users.
* Replies & Mentions: By using the ‘@’ symbol and their username, users have the option to reply to tweets and mention other users.
* Verification:The identity of prominent individuals, brands, and organizations can be authenticated using Twitter's blue checkmark verification badge.

Even though the effects of social media are debatable, the one thing that everyone would agree is that it has an ability to rapidly disseminate information and facilitate public discourse.

# CHAPTER ONE: The Worksheets

This chapter begins with the creation of Key Performance Indicators (KPI) in several worksheets for Twitter platform. The KPI’s include Total tweets, Avg. Impression Rate, Engagement rate, Tweet volume by weekday.

1. Total tweets:

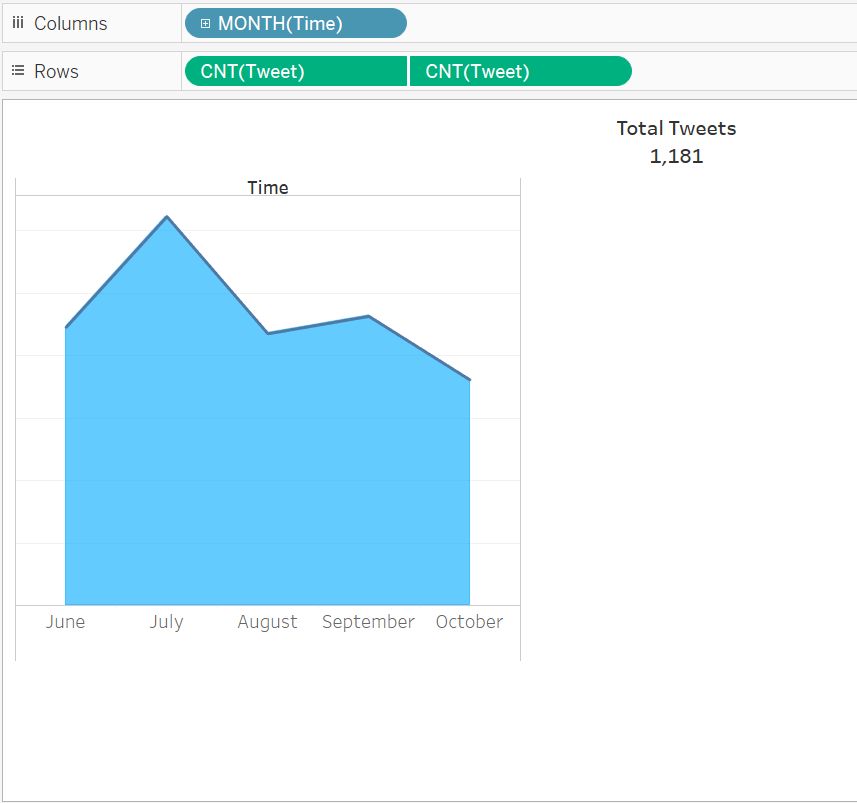
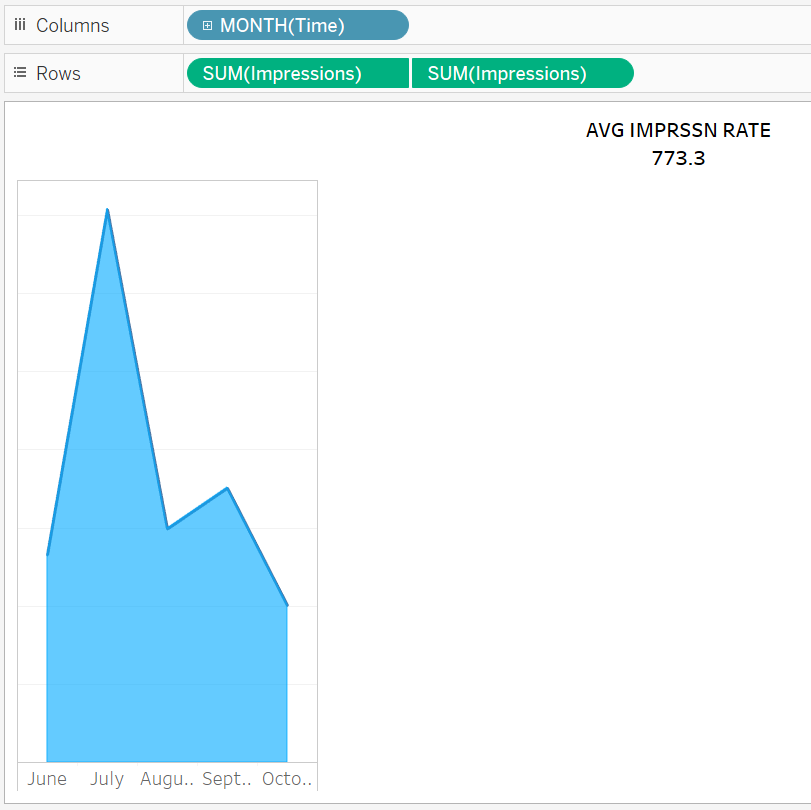
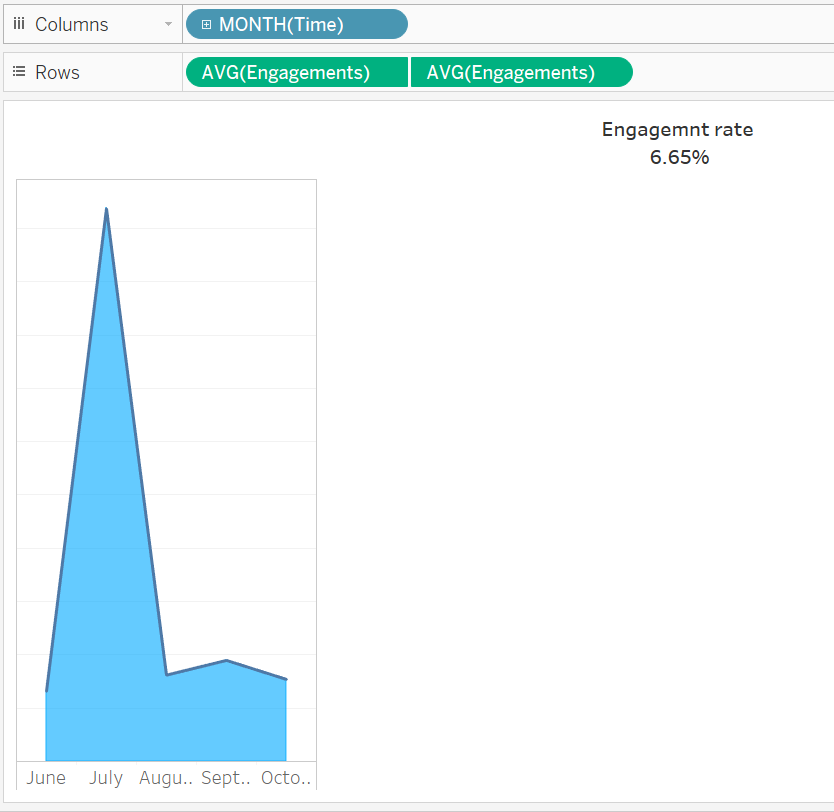


Figure 1.1: Count of Total Tweets

Total tweets track the number of tweets over a series of months. Here data is organized as the different months of a specified period (e.g.: June, July, August, etc.) along columns.

1. Average Impression Rate:  Figure 1.2: Average rate of Impressions

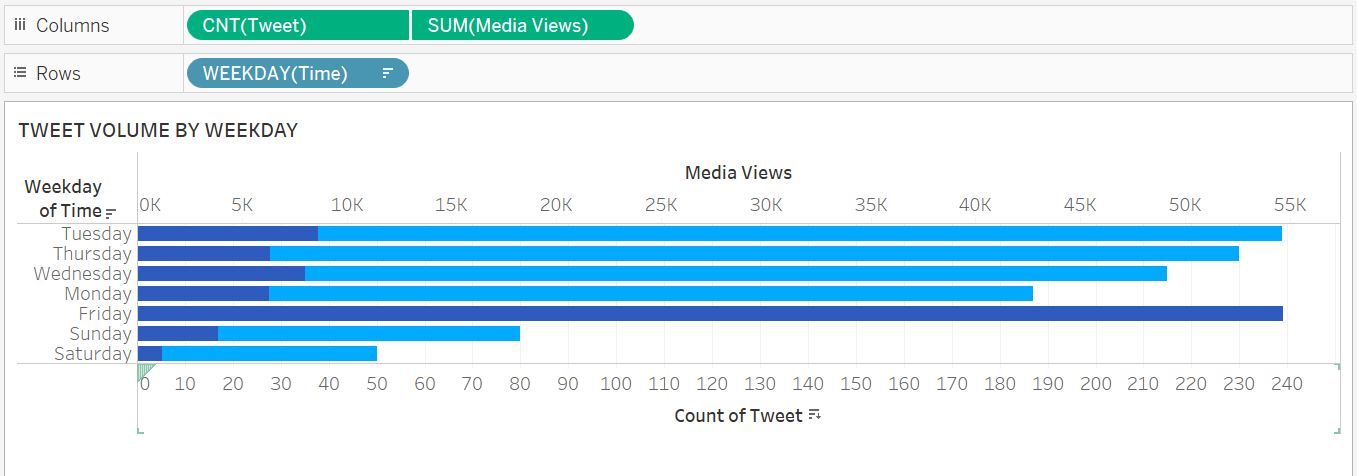
The number of times a post is displayed to users in their feeds or timelines is the Impression rate. It doesn’t means that it should necessarily denote user engagement or interaction with the post. It can range from few hundreds for smaller accounts to thousands or millions for larger engaged accounts. However, these factors can fluctuate based on factors such as type of content, the number of followers, engagement level of audiences, and timing of posts.

1. Engagement Rate:  Figure 1.3: Percentage of Engagement Rate

This is a key metric in social media that measures how actively the audience interacts with the content. It can be calculated in various ways depending upon the platform and the specific metrics we consider. It is basically expressed as a percentage.

The formula of

Engagement rate(%) = (Total Engagements/ Total Impressions)\*100

1. Tweet Volume by Weekday:  Figure 1.4: Volume of Media Views and Count of Tweets by Weekdays

This provides a breakdown of tweet volume and media views by the day of the week, allowing us to analyze and compare how our twitter activity and media content perform on different weekdays. It also helps us to identify patterns, trends and opportunities for optimizing the social media strategy.

# CHAPTER TWO: What is the main reason behind the usage of this social media channel?

The main reason for using Twitter varies from person to person, as it also can be utilized for various purposes. Some of the primary reasons include.

1. Communication: Twitter is a platform that enables real-time communication. Engaging in conversations, sharing updates, and connecting with others is possible for users, whether they are friends, family, colleagues, or people with similar interests.
2. News and Information: Many uses Twitter to get the most recent news and information on a variety of subjects, including current affairs, politics, sports, and entertainment. It is frequently used as a source of breaking news and popular stories.
3. Promotion and Marketing: Twitter is used by people, businesses, and organizations to advertise their goods and services, events, and campaigns. It has the potential to be a marketing tool for reaching a sizable and active audience.
4. Entertainment: It is also a hub of entertainment discussions, including live tweeting, following celebrities, and getting part of pop culture conversations.
5. Networking: It is one of the best platforms for Professionals to network with others in their industry by sharing experiences and build connections. It also facilitates career growth and business development.
6. Social Activism: The platform allows to raise awareness and mobilises possible enhancements for social changes.
7. Discovering Trends: Exploration of trending topics and hashtags make it easier to users to join various discussions.
8. Community Building: Finding similar taste-based groups and connecting with like-minded individuals supports community building.
9. Customer Service: Customers can ask questions, get help, and leave feedback on brands and businesses using Twitter as a customer care channel.

# CHAPTER THREE: What are your campaign goals?

The above information on Tweet volumes and Media views by the weekdays, helps to achieve several campaign goals and objectives. They are as follows.

Improved Content Relevance: Analyzing the audience on their most active hours and tailoring content to their preferences. This helps in sharing content that is more relevant and interesting to the target audience.

Optimized Posting Schedule: Ensuring the tweets are seen by the right people at the right times. This fine-tune in posting schedule can lead to increased campaign visibility.

Effective Seasonal Campaigns: Planning of campaigns is done and executed by analyzing seasonal trends that coincide with specific events or holidays. It would help boost the effectiveness of promotions during these periods.

Competitive Advantage: Analyzing the data and gaining valuable insights helps in fine-tuning strategies and outperforming competitors in terms of media utilization.

Higher Conversion Rates: More engagement and improved content relevance can lead to higher click-through rates and better conversion outcomes for campaigns that aim to drive traffic or conversions.

Audience Insights: The data obtained can provide valuable insights into audience's behavior and preferences, in turn, can help you create content and campaigns that better resonate with your target audience.

Cost Efficiency: By optimizing posting schedules and content strategies, wasteful spending of money is reduced and can allocate resources more efficiently to achieve campaign goals.

# CHAPTER FOUR: Can you measure success with platform data alone or you need some additional data sources?

Yes, measuring the success is not limited to platform data alone. It needs to incorporate data from various other sources. Depending on our specific goals some sources that are useful are:

1. Google Analytics: Website analytics tools like google analytics help in driving traffic to our Twitter by metrics such as page views, conversion, time spent on site and bounce rates.
2. CRM Data: By Customer Relationship Management Data, we measure success in terms of customer relationships. This provides insights into lead generation, customer acquisition, and customer retention.
3. Sales and Revenue Data: Making a connection between twitter data and sales and revenue is important for e-commerce businesses. This helps in measuring the impact on bottom line directly.
4. Competitor Data: Assessing ours and competitor’s performance and comparing it to each other is a valuable benchmark for measuring success.
5. Demographic Data: Depending on the target audience and understanding whether we’re reaching right people on the twitter, we integrate demographic data.
6. Search Engine Optimizer Data: Search Engine Optimizer Data is valuable to track the impact of twitter in our search engine rankings and online visibility.
7. Survey Data and Feedback Data: To get Qualitative insights on customer satisfaction and sentiments, conducting surveys and gathering feedback are helpful, which in-turn points to specific areas of improvement.
8. Content Performance Metrics: Assessment of metrics like blog views, video views, download rates, etc. helps in impact of twitter in creating content strategy.

# CHAPTER FIVE: (DO YOU UNDERSTAND WHO YOUR WEBSITE VISITORS ARE? CAN YOU COMPARE THEM WITH YOUR SOCIAL FOLLOWERS?)

Yes, it is possible to compare website visitors to social media followers. Comparing these audiences gave a valuable insight into the potential opportunities for the future online presence. These includes several steps, starting with:

1. Demographic Analysis: This facilitates identifying commonalities and disparities such as age, gender, location, and interests. The twitter followers were primarily located in urban areas, while the website visitors were from a wider geographical range.
2. Content Preferences: Analyzing the most popular blog posts, Articles and social media posts helped in creating the content liked by website visitors and social media followers. It also helped in identifying certain content’s performance on one platform but not on the other.
3. Mapping customer journey: Mapping out the customer’s journey helped in understanding how they transferred to website from the previous social media profile. This in turn revealed how my social media presence supported my website goals.
4. A/B Testing: Experimenting A/B tests with different approaches of messaging, calls and content types allows us to see what resonates best with each group.
5. Customer feedback: Conducting Surveys and collecting feedback from both website visitors and social media followers provided qualitative insights into their preferences, needs and expectations.

These methods and overall comparison helped in optimizing online presence and in making informed decisions on content strategies, marketing campaigns and audience targeting.

# CHAPTER SIX: The Dashboard

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Figure 6.1: The Final dashboard

Creating final Tableau dashboard for Twitter with some typical metrics and visualizing the data to gain valuable insights.

1. Total Tweets: Displaying a dual axis chart at the top of dashboard, indicating the total number of 1181 tweets.
2. Average Impression Rate: Created a different dual axis chart, below the total tweets which indicates an average impression rate of 773.3. This metric helps gauge the reach of the tweets on average.
3. Engagemnt Rate: Shows the engagement rate of 6.65%. This metric represents the level of interaction and engagement with the tweets.
4. Tweet Volume by Weekday: A dual-axis bar chart which indicates the highest tweet volume is on Tuesday and Friday, while the lowest is on Saturday. Each day of the week is represented on the X-axis , and the tweet count on the Y-axis.

# CONCLUDING REMARKS

Creating a Tableau dashboard for twitter metrics is a valuable way to gain insights into social media performance. With 1181 total tweets, an average impression rate of 773.3 and an engagement rate of 6.65%, the dashboard provides a comprehensive overview of the twitter activity. Additionally, the breakdown of tweet volume by weekday reveals that Tuesdays and Fridays are your most active days, while Saturdays constitutes the lowest. This information can guide the content strategy and help in making data-driven decisions to enhance the twitter presence.

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# APPENDIX (if necessary)